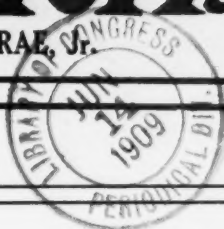


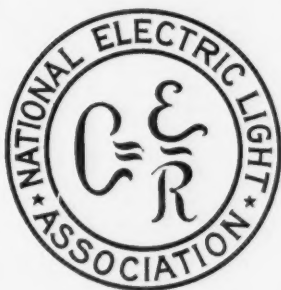
JUNE, 1909

SELLING ELECTRICITY

Edited by FRANK B. RAE, Jr.



The Commercial-Man's
Report of



The Atlantic City
Convention



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Detroit, Michigan

SELLING ELECTRICITY

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JUNE, 1909

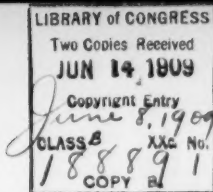
No. 5

CONTENTS

Editorial—Frank W. Frueauff	259
The 32nd Annual Convention	260
Detail of Commercial Sessions	261
Current Consuming Devices Exhibited	266
Convention News Notes	268
Abstracts of Papers Presented at the N. E. L. A. Convention	269
Development of Revenue from Existing Customers	
Theodore I. Jones	269
A "Dollar Idea"	272
Electricity for National Advertising	George Williams 273
The Adoption of Electrical Heat for Industrial Purposes	
Charles J. Russell	275
Relation of Electric Vehicles to Central Station Business	
James T. Hutchings	279
Practical Illuminating Engineering in Connection with a	
Commercial Department	G. A. Sawin 282
Private Policy	Paul Lupke 284
Electricity for Domestic Purposes	Mathias Turner 287
The Story of a Successful Sign Campaign	J. B. Lindl 289
A "Dollar Idea"	293
Indoor Electric Signs in a Minneapolis Department Store	294
An Easter Window	296
State Regulation and Commercialism	Glenn Marston 297
Right Thinking—Right Results	Morgan J. Lewis 300
A "Dollar Idea"	300
Tactful Relations With Customers	Herbert Alden Seymour 301
A "Dollar Idea"	304
Toledo Street Lighting	T. D. Buckwell 305
A "Dollar Idea"	306



FRANK W. FRUEAUFF
The New President of the National Electric Light Association



SELLING ELECTRICITY

Vol. V

JUNE, 1909

No. 5

Frank W. Frueauff.

THE election of Frank W. Frueauff to the Presidency of the National Electric Light Assn. is welcome news to central station commercial men. He is distinctly one of us. As partner of Henry L. Doherty & Co. his attitude and policy are known quantities and the commercial men are assured in advance of a progressive and aggressive administration of the Association along the lines which will completely obliterate the jealousies which existed several years ago between the commercial and technical men of the industry.

Frank W. Frueauff is thirty-five years old and has been identified with the lighting companies of Denver for seventeen years. He began as a meter reader and lamp clerk for the old Denver Consolidated Electric Company in 1891. In 1904 he was elected Vice-Pres. and General Manager of the Denver Gas & Electric Co. That is a long climb and thirteen years is a short time in which to accomplish it. The inevitable conclusion is that he not only burned his share of the midnight incandescent but also industriously made hay when the sun shone.

Mr. Frueauff is handicapped by being a partner of Mr. Henry L. Doherty. Some might think of it the other way about, but one must remember that it is pretty hard for an 8 cp. lamp to outshine one of 16 cp. Also Mr. Frueauff is neither spectacular, nor very dignified. At the Atlantic City Convention he spent as much time and energy organizing the Western ball team (which won) as he did in playing politics for the Presidency.

Frank Frueauff is where he is because he not only does things but gets them done. He has native ability reinforced by the power to appreciate and direct the abilities of others. He not alone guides the destinies of a large plant—a grown man's job in itself—but as right-hand man to Mr. Doherty he is deep in the plans and policies of the many subsidiary companies controlled or operated by the Doherty interests.

At present Mr. Frueauff is an officer in the following organizations:
Partner of Henry L. Doherty & Company.
Vice-President and General Manager, The Denver Gas & Electric Co.
Vice-President Pueblo (Colo.) Gas & Fuel Co.
Vice-President Lincoln (Neb.) Gas & Electric Light Co.
Vice-President Doherty Operating Co.
Vice-President Lebanon (Pa.) Gas & Fuel Co.
Secretary Lacombe Electric Co.
Treasurer Summit County (Colo.) Power Co.
Director Massillon (Ohio) Electric & Gas Co.

Mr. Frueauff holds memberships in the National Electric Light Assn., American Gas Institute, National Commercial Gas Assn., of which he is a Past President, and Colorado Light, Power & Railway Assn. He also

belongs to the Lawyers' Club, New York, Denver Club, Denver Athletic Club, the Denver Country Club, and the Overland County Club of Denver, besides the Sons of Jove and El Jebel Shrine.

He is approachable, likeable, interesting, with friends strewn all the way from 'Frisco to New York.

He will make a good President.

The Thirty-Second Annual Convention

Comment Upon the Commercial Program

THE 32nd Annual Convention of the National Electric Light Association is history. Ex-President Eglin has the satisfaction of knowing that under his leadership the organization enjoyed its most successful year, greatly widening its field of usefulness and increasing in membership almost one-half over the year before. President Frueauff, in taking executive command, can confidently look forward to a year of even greater progress.

The Commercial Sessions of the 1909 Convention were especially successful. The program was varied and interesting, and the papers gave evidence of the most careful preparation. It is to be regretted, however, that more time was not allotted for discussion, which is generally admitted to be of the greatest benefit. This could be accomplished another year by omitting the reading of papers (distributing them by mail a few days in advance to members) or by reducing the number of papers presented, perhaps both.

A significant incident, both of the papers and discussion, was the reiterated demand by commercial men for specific data on various classes of business. So far we have contented ourselves with quoting isolated examples of successful commercial practice. Today the cry is for codified facts and figures from many sources. The old attitude of objection to new policies—the my-business-is-different plea—has given way to progressive attitude of inquiry. Commercial men no longer care to adopt or reject any plan or system upon the evidence of a single success or failure: they ask for complete details from many sources. This is encouraging for several reasons. It means that while future commercial progress may appear slow, it will be sure; that instead of expensive and ill-advised commercial gambling we will have conservative and profitable development. Just what means will be adopted to gather and disseminate the desired data is not evident. Several asked that committees be appointed for the purpose but to this the objection was raised that "what is everybody's business is nobody's business." Another suggestion was for the employment on salary of a "Commercial Secretary" who should devote all or part of his time to the gathering and codifying of the practical data desired. The new administration may be depended upon to meet the plainly expressed wish of the commercial men for this class of information.

Another notable and hopeful sign of practical advance is the interest everywhere shown in solicitor's data on electric power. The old scheme of taking on power business by main strength and guesswork seems no longer to be popular. Commercial men are beginning to appreciate that their work dovetails closely into that of the engineer and operating man and that

such terms as "peak," "load factor" and "power factor" have a commercial as well as technical meaning.

Co-operation between the members of the N. E. L. A. and various advertising and automobile interests was also discussed at length. It was brought out that several of the larger companies are selling electric signs to national advertisers and that certain billboards in larger cities are lighted through contracts with advertising agents and bill-posters. Why not have the Association assist in bringing full data on bill-board and sign locations, rates and maintenance charges to the attention of those who might use this service? Co-operation similar in kind though different in character might be undertaken with automobile manufacturers.

These are all suggestions for development and indicate clearly both to the commercial men and those interested chiefly in technicalities that the future of the central station business-getter is closely allied to the engineer.

Detail of Commercial Sessions

Atlantic City Convention, Thursday and Friday, June 3rd and 4th

THURSDAY MORNING SESSION

W. W. FREEMAN, BROOKLYN, PRESIDING

First Paper—"Methods of Introducing Tungsten Lamps and their Effect on Central Station Income." By Mr. A. H. Atkins, Boston.

DISCUSSION:—In opening the discussion, Mr. M. S. Seelman, Brooklyn, outlined the methods in vogue in Brooklyn covering the sale of tungsten lamps. He felt that the business could not be left to make-shift contractors, but required initiative selling organization. Mr. Seelman stated that since April of last year, when his department commenced to introduce the tungsten lamps, 1000 stores have been equipped. Average number of lamps installed in stores is six and the revenue has averaged \$8 per month per customer or about \$75,000 for the year. A great many barbers have installed tungsten lamps in Brooklyn. They had long desired the electric vibrator, but felt that they could not afford to use electric light on carbon lamp consumption. The Brooklyn contractors have enjoyed a greatly increased prosperity

through co-operation with the Brooklyn Edison Company in pushing tungsten lamps. Mr. J. T. Hutchings, Rochester, said that if the tungsten lamp is to be profitable to the central stations they must push the lamp before the lamp begins to push them. "In Rochester," he said, "we have kept the price of tungsten lamps so low as to control the situation, and we have induced the popularity of the 100 watt lamp by scaling down the prices of the larger sizes. We maintain the lamps and have a special service which takes care of the cleaning of the lamps and reflectors. Once or twice a month all lamps and reflectors are washed. We have many stores who turn the lights on in the morning and burn them all day, and our load factor has been greatly improved. We strongly advise the use of single light fixtures, as the cost of wiring is greatly reduced."

Mr. Douglass Burnett, Baltimore, stated that his company sells tungstens at cost plus 10%. They take care of early burn outs and defective

lamps, and in many cases allow the customer a month's trial. He said: "We have been very successful in displacing carbon lamps for street lighting and on the main thoroughfares tungstens have been substituted almost exclusively."

Mr. J. E. Davidson, Montpelier, said: "Tungsten lamps will meet any condition. Some people use tungsten lamps only to meet gas competition. This is dead wrong. You can get net prices for the lamps as well as cost, for you can always buy business. Practically all our commercial lighting has been changed over to tungsten, and we have banished the gas arc." Mr. Davidson said that he felt there was a strong need of tungsten lamps of 150 watt, 400 watt and 500 watt consumption, and asked that the Association take the matter up with the lamp manufacturers.

Mr. J. D. Israel, Philadelphia, stated that through the use of tungsten lamps his company had reduced the consumption of display gas 30%.

Mr. H. W. Hillman, Grand Rapids, told of the results secured in a small gas town by the use of tungstens and stated that on the last Saturday night he had sent a man down to the main street of his city to take account of the connected loads of both gas and electricity. He found that there were 6800 16 cp. equivalents of electricity and 2800 16 cp. equivalents of gas.

R. M. Searle, Rochester, stated that he had no fear of permanent loss of business through the use of tungsten lamps. The customer says, "I have so much money to spend and I want more light." Said Mr. Searle, "we are here to give it to him."

Second Paper—"Practical Illuminating Engineering in Connection with a Commercial Department." By Mr. G. A. Sawin, Newark.

DISCUSSION:—The discussion was opened by Mr. J. D. Israel, Philadel-

phia, who heartily endorsed Mr. Sawin's paper in that illuminating engineering offered a practical medium for establishing a better service. "There must be a close, satisfactory and intimate relationship between the company and the consumer," he said. "We should cultivate the architects, particularly to eliminate extravagance and help him get efficient illumination. We have allowed this matter to drift in the past."

Mr. F. E. Smith, Boston, stated that this scheme had worked out well for his company and that the Illuminating Engineering Department handled all complaints from lighting customers. Since last September, they had made over 900 inspections of stores. Over 100,000 lamps have been put out.

Mr. C. N. Stannard, Denver, stated that he thought the Illuminating Engineering Department should specify size and type in the installation of lamps and reflectors. "A bare lamp is no more complete than the bare gas tip," he said. "The lamp and shade are one."

Mr. M. S. Seelman, Brooklyn, deplored the hanging of tungstens on old combination fixtures as they are generally too low. He feels that the architect and builder should be educated in this matter to the end that low hanging combination fixtures should no longer be installed.

Third Paper—"Intensive Methods of Business Development." By John C. Parker, Rochester.

DISCUSSION:—Mr. E. W. Lloyd, Chicago, opened the discussion.

Mr. C. A. Graves, Brooklyn, told of the Brooklyn Edison Company system of specializing in power work. The power men are assigned to cover special industries, one man for wood working shops, one for chemical works, one for tailors, etc. Mr. Graves believes in working by industries rather than by streets as

it advertises electric power more effectually and tends to produce more skill and better results on the part of the power representative. Mr. Graves suggested a permanent handbook committee to collect power data to be made available to every central station man.

Mr. H. W. Hillman, Grand Rapids, said that in his city of 100,000 people, he employed three power men and had connected 17,027 hp.—739 motors—626 customers or about 1 hp. for every 6 people. Mr. Hillman recommended the general use of the curve drawing watt meter, and told how it had aided him in satisfying disgruntled customers, as he was able to show in the case of one store that the night watchman was operating the entire installation. In another instance, a manufacturer found through this instrument, that his power was closing down fully an hour before the whistle blew and in another the power load did not come on before half past seven in the morning, whereas the factory was supposed to open promptly at seven.

Mr. E. T. Penrose, Tyrone, Pa., urges that some effort be made to provide some agency for the exchange of power data for small companies. Mr. Penrose complained that at present most of the data presented at conventions was compiled by the larger companies and in many cases not applicable in the small towns.

Mr. C. H. Stevens, Brooklyn, said that under the Brooklyn Edison Company system he had been assigned to sewing machine prospects. There are 600 in the city, 200 are already connected. He expects to displace 27 gas engines within the next two months. He feels that the Brooklyn system of specializing on industries is most efficient.

Mr. R. M. Searle, Rochester, said that he is taking steps to provide a consulting engineer for every branch

of his business, illumination, power, electric vehicle, etc. For the encouragement of the commercial department, however, these engineers will sign no contracts. Mr. Searle said: "The central station exacts specifications and guarantees from the manufacturers. Why should the customer not receive the same assurance? We are willing to give a guarantee in the shape of a 90-day trial wherever it is desired."

Mr. George N. Tidd, American Gas & Electric Co., offered to the members of the Association a large amount of data which has been compiled for several years past by his companies.

Fourth Paper—"Can a Display Room be Conducted Upon a Profitable Basis?" By Frank B. Rae, Jr., New York.

Fifth Paper—"Advantages to be Derived from Uniform Commercial Department Forms and Methods." By C. N. Stannard, Denver.

No discussion was allowed on either of these papers, it being time for adjournment.

THURSDAY AFTERNOON SESSION

MR. PERCY INGALLS, Newark, in the Chair, and later MR. FREEMAN.

Sixth Paper—"Electricity for Domestic Purposes." By M. E. Turner, Cleveland, Ohio.

This paper was discussed by Mr. Hillman, Grand Rapids.

Seventh Paper—"Compilation of Load Factors." By E. W. Lloyd, Chicago.

Eighth Paper—"Electric Power." By H. J. Gille, Minneapolis.

Ninth Paper—"The Advantages of Group or Individual Drive in Certain Installations." By C. A. Graves, Brooklyn.

These papers being of kindred character were discussed jointly.

Mr. H. J. Gille explained that al-

though he had prepared a large number of comparative curve charts, it had been impracticable to publish more than a small number in his printed paper. He offered the data, however, to the Association for distribution among the members.

Mr. H. W. Peck, Rochester, opened the discussion, followed by Mr. Penrose, Tyrone, Pa. Mr. Penrose protested against the turning down of all power business merely because it is below average power cost. "If peak lighting business is welcomed," he said, "why turn down profitable power business just because it may cross the peak?"

Mr. Harold Almert told of experience in a Western town.

Mr. Samuel Insull, President of the Commonwealth Edison Company, then took the floor. He said, in part: "I want to address myself to the small companies—those selling less than 100,000 kilowatts per month. From my own experience I know that with the average company the interest cost is the biggest item you have, that it directly follows the curve of your load sheet. Take a company, say, with half a million investment; most of its business consists of store, city and residence lighting. All affecting the peak. Now there is business to be secured in connection with the water works pumping station, on which you could figure only your bare station cost, as the greatest consumption of water is at the time of year of your lightest load. The best way to handle it would be on the two-rate system. Another class of power business is the interurban railroad power. Their load factor is poor and the greatest demand comes also in the summer. Suppose your load factor was thirty per cent. If you could secure this business it would improve it at least ten per cent. That means that you have thirty-three per cent over which to spread your money for interest and depre-

ciation. Analyze your costs. You can take on business which might seem a dead loss but is in reality a profit. Instead of an investment of \$600 or \$700 per kilowatt, your investment on this business would not be over \$200 per kilowatt. Do not figure on your present status but on the basis of what your conditions will be when you have taken over such business. It is but natural for you to think that it is all right for us to talk, but that our conditions are different. I have learned more from small plants which has aided us in our operating problems in Chicago than from anywhere else. A few per cent in growth makes a difference between a languishing business and a prosperous one. Choose business that does not hit the peak too hard, but take it cheap. It gives you power and financial strength."

Mr. E. F. McCabe, Lewiston, appealed for figures on the running factor as well as the load factor.

Arthur Williams, New York, said that he endorsed Mr. Lloyd's paper strongly and recommended that the various power terms such as load factor, should be clearly defined and standardized, so that we all may talk alike.

Tenth Paper—"New York High Pressure Fire System." By Arthur Williams, New York.

Eleventh Paper—"Relation of the Electric Vehicle to Central Stations." By J. T. Hutchings, Rochester.

These papers received very spirited discussion, for both central station men and manufacturers of electric motor vehicles.

Mr. Baker of the General Vehicle Company said: "Electric vehicles have suffered as a result of trouble and experience with early models, but as a result of reduction in weights and the development of highly efficient storage, modern vehicles show a great increase in

mileage at reduced cost. The main troubles are due to wrong methods in the care and handling."

Mr. Neuman, Woods Motor Vehicle Company, announced that they were about to establish a department to be devoted to assisting central stations in the development of electric motor vehicle business. Mr. Neuman warned central stations of the danger in using wrong tires on electric vehicles. "Different kinds of tires are to the vehicle what different types of lamps are to the central station," he said. "With one tire a car will do 12 miles on a charge, whereas with another tire it will do 18 miles. Central stations should work with the manufacturers for the protection of the electric vehicle. Instruct the garages against the over-charging of batteries and make the rate as low as possible, for the garage is in business to make money and their rate to their customers are established on the basis of the gasoline car. Garage business is absolutely off the peak, because the usefulness of the vehicle depends on its being available during the day and evening. It will therefore be charged at night."

Mr. Samuel Scovil, Pres., Cleveland Elec. Illuminating Co., Cleveland, said that there are 1500 electric vehicles in Cleveland giving satisfaction, largely, he believes, owing to the fact that the mercury working rectifier is used in charging. Mr. Scovil does not agree with Mr. Hutchings, as to the advisability of the central station doing any repair work.

Mr. T. C. Martin announced that he had sent out letters of inquiry to 4500 central stations, asking for data on electric vehicles. Fourteen hundred companies replied, 218 of which are interested and are already charging electric vehicles. Two hundred and thirty-four furnished data and stated that they were contemplating pushing this business. Numerous

others are prevented by the condition of their roads, hills, etc. Mr. Martin says he looks forward to a new era of transportation, and believes that it will bring much profit to the central station.

Mr. F. M. Tait, Dayton, stated that he had gathered considerable data and that there are at present in Dayton about three electric vehicles to each 1000 people. Mr. Tait advises care in the selecting of tires and active co-operation between the manufacturers and the central stations.

FRIDAY MORNING SESSION (Held in Marine Hall)

MR. FREEMAN IN THE CHAIR.

Twelfth Paper—"Electricity for National Advertising." By George Williams.

Mr. Williams was unfortunately unable to be present. His paper was read for him.

DISCUSSION:—T. I. Jones, New York, said that he thought it was hardly practicable to compile any data on the subject of bill board locations in a large city. In New York, for instance, it would be impossible.

Mr. H. J. Gille, Minneapolis, considered it of vital importance and suggested that the Association consult with the National Bill Posting Association to this end. Mr. Gille considered that he had talked with representatives of that body, and that they are much interested and also that little can be accomplished without their active support. They have a line on the business and employ a great many salesmen, and the Association would do well to take the matter up actively with them.

Mr. C. N. Stannard, Denver, said that he has received a number of orders from the National Bill Posting Company for signs and endorsed Mr. Gille's suggestion.

Thirteenth Paper — "Development of Revenue from Existing Customers."

By T. I. Jones, New York.

DISCUSSION:—Mr. H. J. Gille, Minneapolis, said that there are a number of manufacturers who publish very high class advertising, designed for distribution by lighting companies among their consumers. He has often purchased such material, and recommended it to the smaller companies who cannot afford to spend the money necessary for preparation of high class advertising.

Mr. J. F. Becker, Brooklyn, told of their system of dividing their city into territorial districts for which individual agents were responsible.

Mr. C. N. Stannard, Denver, said that he had organized a "good ser-

vice department," which found that there are twenty ways to aid in the developing of increased revenue from a fully equipped consumer, through attention to switches, fuses, empty sockets, dead lamps, etc.

At this point, the Hon. Frank Bergen of New Jersey delivered an address and the meeting went into executive session for the election of officers and to receive the reports of committees.

The following officers were elected for the ensuing year:

President, Frank W. Frueauff, Denver, Colo.

First Vice-President, W. W. Freeman, Brooklyn, N. Y.

Second Vice-President, John F. Gilchrist, Chicago, Ill.

Secretary and Treasurer, F. M. Tait, Dayton, Ohio.

Current Consuming Devices Exhibited

Displays Were of Great Interest to Commercial Men

THE Exhibition arrangements of the 32nd Annual Convention of the National Electric Light Assn. were without doubt the most complete and satisfactory so far employed by the Class D members. While the booths were small they provided amply for the goods displayed, the exhibitors evidently believing that a small showing served quite as well as a large one.

Notable among the current consuming devices were electric automobiles, of which ten makes were on display. Automobile manufacturers, however, failed to grasp their real opportunity as their efforts were devoted more to showing their individual machines than to demonstrating to central station men the advantage and need of co-operation

between electric vehicle manufacturers and lighting companies. It is to be hoped that another year will see more co-operative endeavor on the part of the electric automobile manufacturers to bring their proposition in a big way before the fraternity. This was done to a considerable measure on the Convention floor in Mr. Hutchings' paper and in the keen discussion that followed. It would seem that a greater and more lasting impression might have been gained by codifying the arguments and giving figures to prove not only the advantages but the best methods of promoting the sale of the electric auto from the central station standpoint.

The suction and vacuum cleaner people were also largely in evidence, not less than five types being dis-

played. This appliance already has a very wide sale and should be vigorously pushed by all lighting companies. The claim of one manufacturer, to the effect that "the vacuum or suction cleaner is as necessary a part of a household equipment as an ice-box or furnace" may seem somewhat exaggerated but this attitude is one which the central station should immediately adopt. Suction sweepers and cleaners ranging in price from \$50 to several hundreds of dollars were exhibited, indicating that machines are available for practically every class of customer which the lighting company may have.

New lamps and fixtures were also largely in evidence, especially flaming arcs, these ranging in size from the four carbon unit displayed by C. J. Toerring Co. to the tiny Star Flame which had its first introduction to the industry at this Convention. Of the new fixtures, the folding Tungstolier, the Federal fixtures and the new Nernst units were among the most interesting.

A feature of the Exhibition was the great interest evidenced by the public. An admission charge of 10 cents was made to the pier and the many visitors to Atlantic City spent a considerable amount of time inspecting the booths. This was a distinct advantage to those exhibitors whose devices appealed to the public, such as the automobile and suction sweeper manufacturers, but proved annoying at times to other exhibitors and to delegates at the Convention. A large space in the centre of the hall was kept clear for dancing in the afternoon and evening, music being furnished by the famous Filipino Band. This extra attraction also drew large numbers of the public so that at no time during the Convention from the opening of the pier until the lights were out was there a lack of interested attendance.

The following manufacturers dis-

played apparatus and appliances of interest and value to commercial men. It is strongly recommended that those who failed to attend the Convention secure for their files the new literature of the products listed:—

American District Steam Co., Steam Heating, Lockport, N. Y.
 American Electric Heater Co., Electric Heating Appliances, Detroit, Mich.
 Anderson, A. & J. M. Mfg. Co., Electric Automobiles, Boston, Mass.
 Anderson Carriage Co., Electric Automobiles, Detroit, Mich.
 Baker Motor Vehicle Co., Electric Automobiles, Cleveland, Ohio.
 Columbus Buggy Co., Electric Automobiles, Columbus, Ohio.
 Electric Suction Sweeper Co., Suction Sweeper, New Berlin, Ohio.
 Economical Electric Lamp Co., Turn-Down Lamps (Tungsten), 25 West Broadway, New York.
 Electric Cleaner Co., Vacuum Cleaner, 1657 Monadnock Block, Chicago.
 Federal Electric Co., Signs & Lighting Fixtures, Lake & Desplaines Sts., Chicago.
 General Vehicle Co., Electric Automobiles, Long Island City, N. Y.
 Metropolitan Engineering Co., Steam Heating, 1250 Atlantic Ave., Brooklyn, N. Y.
 Nernst Lamp Co., New Type Lamps & Fixtures, Pittsburg, Pa.
 The Rauch & Lang Carriage Co., Electric Automobiles, Cleveland, O.
 Studebaker Automobile Co., Electric Automobiles, Seventh Avenue, New York.
 Star Electrical Concern, New Type Lamps & Fixtures, 74 Cortlandt St., New York.
 Spencer Turbine Cleaner Co., Vacuum Cleaner, 618 Capital Avenue, Hartford, Conn.
 Simplex Electric Heating Co., Electric Heating Appliances, Cambridge, Mass.
 Toerring Co., C. J., Flame Arc Lamps & Inverted Arcs, 2219 Toront St., Philadelphia.
 Tungstolier Co., New Type Lamps & Fixtures, Cleveland, Ohio.
 Westinghouse Electric Mfg. Co., Vacuum Cleaner, Pittsburg, Pa.
 Woods Motor Vehicle Co., Electric Automobiles, 2515 Calumet Avenue, Chicago.
 Waverly Co., Electric Automobiles, Indianapolis, Indiana.

In addition to the above were many other excellent exhibits, but for the most part these were of greater interest to the technical men than to the central station salesman.

Convention News Notes

Mr. A. V. Wainright of the Susquehanna Light, Heat and Power Company held a Convention of his own men in the Hotel Windsor. About twenty-five men from his various companies were present in Atlantic City and independent sessions were held on Thursday, Friday and Saturday mornings. Mr. George Bullock, President of the Company, was present.

Mr. E. R. Davenport, Sales Manager of the Narragansett Lighting Company of Providence, attended the Convention with six of his commercial men. There were in all twelve Narragansett men in attendance, which is a large showing from a company of this size.

On Wednesday afternoon there was a Convention Base Ball game between the Eager, Earnest, Energetic, Efficient, Edifying, Entertaining

EFFULGENT EASTERN ELECTRIFIERS

F. G. Vaughan, Manager
and

The Watchful, Wary, Whimsical, Whizzing,
Willing, Wonderful, Worthy

WINDY WESTERN WINNERS

F. R. Frueauff, Manager.

The Western team won by a score of 8 to 7. An incident of the game was a mock fight between P. S. Von Staagen, one of the coaches, addressed in the garb of Holland, and E. E. Larrabee of Bennington. The police charged down upon them and after much ground and lofty wrestling, gathered them off in an auto.

Mr. H. N. McConnell, for some time Manager Com. Dept., Elmira Wtr. Lt. & R. Co., has been transferred to the Colorado Springs Elec. Co. Mr. McConnell was in attendance at the Convention and left for the West from Atlantic City.

Twenty-eight members of the Brooklyn Company Branch of the National Electric Light Assn. attended the Atlantic City Convention. There are in all 144 members.

A large delegation attended the Convention from Rochester and lodged a very considerable boom for Rochester, as the headquarters for the 1910 Convention.

On Thursday there were three independent sessions of the Convention, a technical session, a commercial session and an accounting session. In fact, they were all very well attended as the evidence of the growth of the N. E. L. A.

President Kulas, of the Tungstolier Company, Cleveland, announced at the Convention that W. H. Wissing comes with the company on June 15th as general manager and in charge of central station new business department. Mr. Wissing, as is now very generally known, is general contract agent for the Union Light and Power Company of St. Louis.

Mr. Fred E. Schorenstein, who has been for some time with the Brooklyn Edison Company, and who was before that with the Henry L. Doherty Company, has lately become affiliated with the Susquehanna Railway, Light & Power Company as a commercial advertising expert.

**Additional Commercial Day Papers
will be published in July
SELLING ELECTRICITY**

Abstracts of Papers Presented at the N. E. L. A. Convention at Atlantic City—Commercial Sessions

DEVELOPMENT OF REVENUE FROM EXISTING CUSTOMERS

THEODORE I. JONES

EXISTING CUSTOMER METHODS

THE plan of action in approaching an existing customer with a view to increasing his current use must of necessity differ somewhat from that of inducing an applicant to use current.

The experience of the existing customer who is a current user may not have been a pleasant one, due to lack of knowledge as how best to apply his current, improperly selected lamps, incorrect motor drive, or kindred reasons, and another form of contract with attention to the complaints of service may be all that is necessary to satisfy him and increase his current use. Such a condition would not be met in approaching the new prospect who had never before used current.

In the treatment of the subject of the development of revenue from existing customers we will consider first the question of rate involved; next, the publicity methods of getting in touch with the customer, the various development methods in general use, and, finally, state the results thus far obtained by the author in this work.

RATE CONDITIONS

The consumers of a given company, so far as the effect which additional consumption will have upon their contract rate is concerned, may be divided into two classes, as follows:

First—Those consumers whose

rate will not be lowered by increased consumption and where additional current must be obtained at the same rate.

In this class we have in New York City apartment houses, residences, and small commercial users where a retail flat rate of 10 cents per kilowatt-hour is charged.

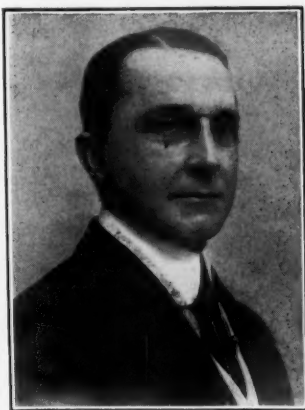
In this class also would come those wholesale customers such as large commercial users receiving the minimum rate, and those on a sliding-scale contract where the increased consumption contemplated would not entitle the consumer to a lower current charge.

In developing revenue from this class of customers the central station representative must rely solely upon his ability to show advantages to the customer from increased illumination or from the use of electric heat or power appliances without regard to the question of rate, for

here the rate is constant, and the benefit which the customer is to receive must be one apart from the reduction in cost per kilowatt-hour.

Second—Those customers on a form of contract where the additional consumption will result in a lower rate through the operation of a new contract or a lower scale on an existing contract.

In this class may be included those customers now on a retail flat-rate basis who by increase of consumption would be entitled to change to the wholesale form of contract at a lower rate per kilo-



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Manager Sales Department
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watt-hour, and those wholesale users where the use of additional consumption contemplated would bring them under a lower current charge on their sliding-scale contract.

In considering development of revenue from this class of customers, the central station representative has to assist him the fact that the additional consumption which the customer will use will entitle him to a lower rate, and this fact may be strongly emphasized in addition to the advantages that will accrue to the customer through the additional current used for illumination, heat or power purposes as recommended.

In considering the question of change of contract, it is the practice in the company of the author to take originally that form of contract which seems best suited to each individual need; but if, after a reasonable period of burning, the consumption indicates a better rate, that form of contract giving the indicated rate is substituted, dating retroactively.

The publicity methods for existing customers may be classified as follows:

First—By solicitation through advertisements sent out by the central station or the electrical manufacturer or supply dealer.

Under this heading come

(a) Newspaper or magazine advertisements.

(b) Billboards.

(c) Dodgers or advertising material sent through the mail.

Second—By the display room of the central station or supply dealer.

Under this heading would be considered

Special displays of the central station, either at its offices, store windows, electric shows, and the like, displays in department stores, or by electrical supply dealers.

Third—By trial propositions.

Under this heading would come iron campaigns, and the trial terms of various appliances sent to the consumer to demonstrate the value of various types of apparatus.

Fourth—By methodical personal solicitation on the consumer's premises.

Under this heading would be classed that publicity for electric service which would be brought to the customer by personal calls of a representative sent out from the central station.

In considering the value of the first and second classes above, it is believed that the results obtained from a purely advertising campaign as well as display-room methods, conducted either by an electrical manufacturer or department stores, or by the central station, are so well known that they will not be here touched upon.

The results of the trial campaign and personal-call methods noted in the classes three and four above, as obtained by the author will, it is believed, be of interest.

TRIAL PROPOSITIONS

In the early part of March we sent out 200 electric irons for a six months' free trial to apartment residential customers in New York City.

In considering this proposition the average central station manager may look upon New York City as one slow in electrical growth, but it must be considered that the residential portion of the city has peculiarities not met with in the average interior town. The apartment dweller is in the great majority in New York. His tenure of residence at any one location averages sixteen months, and the social intercourse present in cities of a smaller size, or where the apartment method of living is not so pronounced, is much less. Where the social intercourse does not bring

neighbors into contact, the verbal self-advertisement of any proposition, and particularly an electrical one, is not obtained.

Again, this mode of living in apartment houses prevents the approach of a solicitor by the original canvassing methods, owing to the refusal of the apartment owners to permit such soliciting. The methods to be now described must therefore be considered under these conditions.

The 200 irons were sent out by express without advance notice. A letter was sent from the sales department of the company, so timed as to be received by the existing customer a short time after the delivery of the iron.

Many plans were considered of sending out these irons:

First—By advance notice,

Second—In the care of a demonstrator,

Third—On receipt of slips requesting trial service, and similar methods, but owing to the local conditions, particularly the inability of solicitors to gain admittance to the apartments, and the lethargy of the average electric light consumer in New York City to request trial propositions of any kind, it was thought best to send the package unannounced.

Of the first hundred irons delivered, sixteen were refused, the reasons for refusal being generally given that no package had been ordered. The expressman delivering the iron was instructed, in case of refusal to receive the package, to advise the customer of its contents. In the above sixteen cases this was done, and four were retained. Of the remaining twelve, various reasons were given for refusal. In a few cases irons were already in use. A few did not care to make the trial and some had no wiring in the kitchen. In the cases of refusals on account of no wiring in

the kitchen, note was made of this fact, and given to the agent of that district responsible for its electrical development.

One month after the irons were delivered, the agent of the district concerned called on the consumers, asking the results of the test thus far, and offering suggestions regarding the use of the iron.

In this manner 200 irons have been delivered, and while our records are not sufficient to give more than two months' average at the present time, an income of 70 cents per customer per month is indicated.

It will be noted that if the iron is never paid for by the consumer, but is used at this rate for a period of six months, a revenue of over \$4.00 will be obtained; materially above the iron cost.

It is the opinion of the author that these trial propositions are most valuable and, carried on in a judicious manner, may be productive of excellent results in increasing the revenue, particularly of residential consumers.

In a small carpenter shop, where the owner is skeptical of the value of electric power, is there any good reason why a trial proposition of an electric motor should not be given for a period of six months, where the estimated current used during this period will pay for the cost of the equipment involved?

It is generally conceded that in 75 per cent of the cases where electric trial propositions have been made judiciously the apparatus stays, and staying has materially increased the revenue from the existing customer.

DEVELOPMENT INSPECTION

In considering the fourth publicity method above stated, viz., that of personally calling upon existing customers by a representative of the central station, it is believed the

plan outlined below, which has been termed "Development Inspection," contains some original ideas.

The plan, in brief, has for its fundamental basis the fact that one representative of a central station is responsible for the complete revenue development over a particular field, whether this development be by the getting of new customers or by the increase of current use by existing customers.

A routine of calls is at the present in vogue with all existing customers averaging over a stated amount monthly once every six months, so that these customers will be visited twice a year by the central station representative.

This method of development inspection has been in operation but a short time; sufficiently long, however, to warrant the continuance of the service on the plan outlined.

Mr. Jones here cited several illustrations of how his men have handled specific customers and increased the consumption materially and concluded as follows:

"Innumerable cases might be cited,

all showing different phases of revenue development from existing customers. It is hoped, however, that those cited will be sufficient to show the method underlying them all, viz., that attention and a display of tact on the part of the selling force will result in increased revenue from existing customers—indeed, often in more revenue than the same attention to applicants for service not connected to the company's mains.

"If the ideas herein noted will cause a little more consideration to be given to the obtaining of additional revenue from existing customers, rather than the devotion of all our energies to the obtaining of new customers with material connection expense, the object of this paper will have been achieved.

"That a satisfied patron is one's best advertisement is as true of a central station company as of any other line of business, and that a little attention and tact to an existing customer is worth while can be easily proved by making the experiment."

A Dollar Idea

John C. McLaughlin, Chief Clerk
Potomac Electric Power Co., Washington, D. C.



THE purchasing public is usually very skeptical regarding the registration of electric meters. For the purpose of demonstrating to them that an electric meter will not register after the current has been turned off at the lamp, we have made a small portable board on which are six lamps of different candle powers, and a recording watt meter with a glass cover. By means of this we are enabled to show the varying speed of the meter with one, two, three or more lamps burning, and also demonstrate the fact that as soon as the lights are turned out the meter immediately ceases to register.

We have found this very valuable, and it has been the means through which a number of dissatisfied customers have been shown that they were getting "a square deal."

ELECTRICITY FOR NATIONAL ADVERTISING

GEORGE WILLIAMS

THE persons who do not admire a modern electrical display represent so small an element of trade that any advertiser can ignore them. The people who most admire electrical display are those who purchase the manufactured produce of the world.

Electrical advertising display is a medium by itself. It is not a competitor of or an encroachment upon any other class of legitimate advertising or method of selling. It is a new creative power, yet one that increases the efficiency of all other selling energy. The most competent newspaper and magazine advertising authorities use and encourage the use of the modern electrical display, and the wise promoter of electricity uses and indorses newspaper and magazine publicity. Neither should the well-ordered billboard be disturbed by the inevitable progress of this new electrical art.

That electrical advertising is productive, observe that no campaign of national advertising that included creditable electric signs has ever been unsuccessful.

Users of electrical advertising display have these advantages:

1. The women everywhere admire the displays because the electric signs help brighten the city. This alone goes a long way in giving prestige to the brand or name of the advertised product.

2. The electrical interests in any city include the personnel of the central station, telephone, traction and electrical supply companies, sometimes directors and stockholders in these companies who also take an interest in electrical progress. The real estate interests are also keen to see the signs go up. All these people can be counted on to stand sponsor for electrically advertised products.

3. Electrical advertising is the one kind that cannot be overdone. Darkness was made only

to sleep in. The Police Department voluntarily protects the electric sign, and everybody has a kindly interest in it.

4. Electrical display is the only kind of advertising that people will pause to read repeatedly. The only kind that people will read with delight a thousand or more times in a year.

5. The readers do not have to buy it in order to read it.



George Williams
Henry L. Doherty & Co., New York City

6. The readers do not forget what they see or forget to talk about it with their friends.

7. Electrical advertising enhances the reputation of the product advertised,—puts on the gilt edge, carries the difference in atmosphere between an engraved card and a printed one, lends the piano finish, suggests that superiority that you can realize right now by recalling the brands or names of the mineral waters, teas, biscuits, beer, razors, plows, dress trimmings, sewing machines, typewriting machines, garters, suspenders, confectionery, corsets or automobiles that are now advertised by electricity. You may not be in a position to know that these particular brands are the best to buy, but you think they are.

8. The small cost of electrical publicity.

Creditable modern signs, each of two to five hundred lamps, can be purchased, placed and lighted for a year in the capital city of every state in the Union and in each of the cities of New York, Chicago, Philadelphia, St. Louis, Baltimore, Cleveland, Buffalo, San Francisco, Cincinnati, Pittsburgh, New Orleans, Detroit, Milwaukee and forty more cities of lesser population, for \$150,000, a modest appropriation for what it would result in impressing a name, brand or phrase upon the mind of every purchaser of anything in this country.

9. Free publicity with it.

No national advertiser who installs modern signs on a broad plan will fail to continue to receive an avalanche of free publicity in newspapers, magazines and in the trade

press. Some of it is publicity that money cannot buy. It shows up in city-promoting literature and on souvenir postal cards. When an English lord visited New York last year the press of the country told us that he praised the White Rock sign on Broadway. Could White Rock have placed its name on the pages of a thousand dailies in a single day if the sign had been a painted one or an inartistic creation?

There are unconcealed tributes awaiting the advertiser who uses the right kind of electrical display. The newspaper does not praise the handsome magazine advertisement, nor the magazine the creditable newspaper copy; both contribute to the fame of the liberal user of electrical display.

10. Increasing the number of readers does not increase the cost, nor does increase of contemporaries lessen the advertising value.

The most valuable location for a sign is in an already well-lighted city, for any city where electrical sign patronage is developed draws more out of town traffic than the ordinarily lighted city. The more signs there are to see, the greater is the traffic. The convention or fair crowd enlarges the number of spectators of the display but decreases the cost of showing the sign per reader. Five dollars per night is a most economical sum for entertaining 50,000 persons.

Standardizing the contracts in price is not practicable either in the rate per lamp or per kilowatt, because the cost of electrical service and cost of roof rentals is varied to so great an extent that a uniform

rate for the whole country would be either too high or too low as compared with legalized schedules of local lighting companies. The hours of burning are already standardized to 6 or 12 hours every night of the year.

It is here suggested that the Association collect the following information from each Class A member and compile for the benefit of members, national advertisers, advertising agencies and sign builders:

(a) List of available local roof locations, their descriptions and terms of rental.

(b) Flat rate of service for 4-cp and upward per year at 6 and 12-hour nightly burning (inclusive of lamp-renewal and sign-cleaning cost.)

(c) Names and brands of products already advertised by electrical display, accompanied by photographs.

This information should be collected and printed without delay, published in book form and tendered for sale to the members.

New-business departments could use this book to show to local prospects for signs.

Sign manufacturers and agencies that desire to quote prices to their customers would be enabled to estimate appropriations for placing signs in specified cities or groups of cities.

A reference to the illustrations, suggestions for design, borders, types of letters, or other detail would result in better variety and more features that would be new to every city.

The development of the electrical sign is assured. Its national popularity guarantees that.

Sign circuits similar to our present arc circuit distribution, and low-voltage current with high-efficiency lamps of four candle-power are interesting possibilities for the central stations to anticipate.

The national advertiser can also look forward to improved facilities in placing his patronage, still lower rates for service, and a greater production from his advertising appropriation.

THE ADOPTION OF ELECTRICAL HEAT FOR INDUSTRIAL PURPOSES

CHARLES J. RUSSELL

THE field for the introduction of electrical heat for industrial purposes is a wide one, covering an enormous variety of applications in which steam heat and direct combustion methods are now used. The adoption of electricity presents the same advantages over the older methods that the electric drive does over the older methods of transmitting power. Safety, clean-

liness, flexibility and convenience are as apparent in these as in other electrical applications. Sanitary conditions are improved, and labor is made more available and contented. Machines may be placed where most convenient without regard to the source of heat. Constant losses due to the transmission of heat are eliminated. Increased production, improved product and decreased

manufacturing cost are also included in the testimony given upon the results obtained by the introduction of electrically-heated equipments.

The tendency on the part of the prospective consumers and of electrical engineers to call for the development of special apparatus and appliances to meet every industrial need, in place of modifying the application to meet the conditions of standardized heat elements or units, has delayed the adoption of electric heat materially.

Electric furnace applications found in the electrometallurgical and electrochemical industries are the most important examples of the use of electric heat for industrial purposes. The developments in such directions have been very rapid and promise to assume commanding importance within a few years. The manufacture of carbide of calcium, aluminum, phosphorus, carbon bi-sulphide, sodium and potassium have been carried on in increasing quantities with the electric furnace. The electric furnace has revolutionized the manufacture of ferro-alloys and is being adopted to a great extent for the refining of steel.

The use of electric welding apparatus is constantly increasing. The development of spot welding and of automatic machinery handling a large amount of work with unskilled labor has marked a distinct advance in many lines of business. Electric welding by the arc for foundry purposes is being very generally adopted by those who have occasion to repair cracked or defective castings. These installations are found in both direct and alternating-current installations.

The fused-bath type of electric furnace for heating special steel before tempering has proven of great merit. The results obtained by its

use are remarkable as compared with the older methods.

Oil tempering baths are now made self-contained and provided with proper heat insulation, mounted upon pipe legs through one of which the connections are made. The temperature is controlled by rather unique means and covers a long range up to 600 degrees. Temperature control is of vital importance in this field, and the electric method offers in these baths the most exact and precise regulation that could be desired.

The electric soldering iron has been a much maligned instrument, principally on account of the very severe conditions under which it is used, and therefore, unless made very carefully and proper instructions given for its use, the results might not be as satisfactory as desired. Some companies have, however, had some experiences with soldering irons of a certain manufacture which have resulted in good satisfaction. This tool is one of the best entering wedges for electric power, as it consumes very little current and paves the way for motors and other power-consuming devices. From the tests so far made on the soldering iron above referred to, the results indicate that a soldering iron can be operated by electricity cheaper than by gas.

In many of the metal trades small articles require to be enameled or japanned. Electrically-heated ovens have proven very successful and economical in the arts and trades for this class of operation. Their cleanliness, the precise control of temperature made possible by their use and the safety of such installations are appreciated in the higher grades of work. The heating requirements of some of these operations can be adjusted so as to constitute an ideal load. Much of the work is baked out at night, and the

day requirement for heat can be met outside of peak periods.

Some of the first successful applications of electric heating to industrial operations were made in printing, publishing and bookbinding establishments. The proven advantages of the electric method leave no doubt that all other methods have been surpassed as to quality and quantity of output and that manufacturing costs have been decreased. In many cases the ability to supply electrically-heated apparatus has proven the factor deciding the question of central station supply of all the plant requirements. While some progress has been made in developing this class of business, the field has scarcely been touched. Such business has come largely without special solicitation either upon the part of the central station or of the makers of electric heating devices.

Electrical heat has been applied to the heads of embossing presses and for press blocks used in the publishing trades. In this line of work high temperature and absolute cleanliness are essential, together with a close control of the heat.

The many uses of glue pots and glue cookers in the printing and publishing trades are well known. Electrically-heated appliances can be supplied for all the processes and purposes for which heat is required in these trades, from melting pots used in the type casting and composing room to electrically-heated tools for the ornamentation of the finished volume.

Heated tools are used in the leather trades for finishing and ornamentation in great variety and to a very large extent. The amount of power used in making up leather into the finished articles is very small, and the proposition is usually a good one for the central station to attack. The results obtained by the adoption of electrically-heated tools

mark a distinct advance in the art and are such as to demand the consideration of those who have not yet turned from older methods.

Glue pots heated electrically have been largely introduced in the wood-working trades. Where the finer grades of work are done, such as in cabinet making, piano case and movement manufacturing, forty to fifty individual glue pots are often found installed in one room. In these cases the electrically-heated pot operates as a distinct economy over the older methods. Sanitary conditions are improved and workmen benefited by the change.

Electrically-heated tools for producing designs upon wood and cork have been tried out and found very successful. Where the wood is soft and the thermal capacity of the tool is properly designed to meet the conditions, the results have been satisfactory.

The manufacture of articles for personal or domestic use or ornament, composed entirely or partly of celluloid, has attained very great importance within the last few years. Heat is necessary in the process of manufacture, and the requirements for constant and exact temperatures are well understood on account of the nature of the materials employed.

Some of the earliest foreign developments of industrial heating appliances were made for this class of business.

Current is used in the clothing and textile trades to a very large extent. Irons of all kinds, shapes and sizes have been designed to meet the special requirements of these varied trades.

Finishing rolls for silk mills heated electrically have proven very successful in practice. A finish is obtained that surpasses that obtained in any other way, and cleanliness and perfect product result. The gas-heated rolls had to be

stopped and the soot cleaned out at intervals. The electric rolls can be run continuously and with a much greater speed, the output being tripled in one case investigated.

Embossing rolls for the designs upon plush and other goods have proven a great success and present all the advantages before mentioned.

The Ludlow Manufacturing Company, of Ludlow, Mass., is successfully using electric heat for drying twine where the twine is wound on large drums and formerly was dried by steam applied to the inside of the drums. It is stated that electric heat has reduced the expense of this work, that less time is required to finish the work, which means increased output, and that the finish given to the twine is superior.

The field for electric irons is very large in the hat, corset and other manufacturing branches of the textiles trades. Shirt factories are large users of hand irons, as many as 200 being installed in a single factory. The manufacture of apparel for ladies' wear calls for the use of pleating, fluting and crimping machines with heated shaped rolls and blocks. Electric heat has been successfully applied for this purpose.

The general advantages of electric hand irons for use in laundries are even exceeded by the value of electrically-heated rolls and blocks for use upon laundry machinery. A complete line of such applications has been tried out and is on the market. Steam and gas-heated apparatus has been superseded in several modern laundries with excellent results.

Electrically-heated rolls have been successfully adopted for finishing fine grades of paper.

Hot plates are also used for finishing samples and small hand-made sheets.

Heated rolls for waterproofing paper with pitch and similar com-

pounds have been successfully introduced.

Automatic machinery used in the paper-box trades has been equipped with electrically-heated glue receptacles and driers.

Paper tops for bottles are treated with paraffine which is kept at the proper temperature by electric heat, and if they are printed before dipping the ink is dried by similar means.

The advantages of electric heat to the confectioner are so well understood that it has been very generally adopted. The character of product was uniform and superior to that generally obtained from other ovens.

The use of electrically-heated vulcanizing molds for repairs to automobile tires is rapidly extending.

Small electric stoves have been adopted to a very considerable extent in the optical trades. These are used in the process of making up lenses, and electric ovens are used to some extent for baking and drying operations.

Branding tools of many kinds are used in many of the industries for marking wood, leather, rubber, meat, and the like.

Electrically-heated devices for use in hospitals and by surgeons and dentists have been developed in great variety. While the amount of this class of business may not be large in any given section, the aggregate demand for heat for such purposes is very large and is usually associated with other requirements for electric service. Along similar lines is the demand for heating equipments for chemical, industrial and bacteriological laboratories. Electrically-heated apparatus for both high and low temperature has found general favor on account of the ease with which exact conditions may be obtained and duplicated.

The field for the development of a large amount of business in this direction belongs to the central station industry. Solicitors may be made familiar with the possibilities of the field by securing information regarding the heat requirements of the various industries we now serve and of those we negotiate with for light or power business. Special

soliciting campaigns for this class of business will hardly be warranted by the immediate results. Systematic team work, with a special representative to whom all such matters are referred for assistance and advice, will be productive of the best results in extending the adoption of electrical heat for industrial purposes.

RELATION OF ELECTRIC VEHICLES TO CENTRAL STATION BUSINESS

JAMES T. HUTCHINGS, Editor

THE electric vehicle will generally be used only during the day and evening, and can advantageously be charged in from six to eight hours. This introduces a class of business, which, by suitable preferential rates, will use electric current at just the time we are all anxious to sell it. This condition permits of a great improvement in the daily load factor, and the records from the ledger footings show that it also increases the yearly load factor, due to the fact that vehicles are used for pleasure more in the summer than in the winter.

Our sales of electric current for charging storage batteries for vehicles in Rochester have increased from 285,470 kilowatt-hours in 1906 to 495,490 kilowatt-hours in 1908, or by 73 per cent., and our income for the corresponding year from \$12,458.91 to \$19,796.56, or by 59 per cent.

Analizing our ledger footings still further, we find that in December,

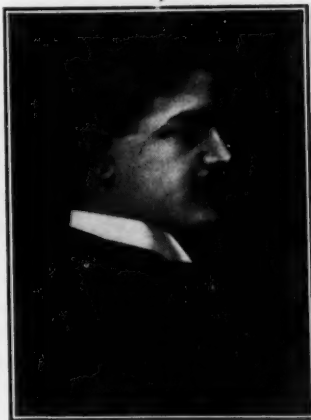
1906, we were supplying 98 private charging stations, which consumed during the year 111,557 kilowatt-hours, and gave us an income of

\$5,881.80, or 5.28 per cent per kilowatt-hour: while in December, 1908, we were supplying 140 private stations, which used during the year 194,171 kilowatt-hours, giving us an income of \$10,730.63, or 5.51 cents per kilowatt-hour.

In December, 1906, we were furnishing current to eight public charging stations, which used during the year 173,923 kilowatt-hours, giving us an income of \$6,577.03 or 3.78 cents per kilo-

watt-hour; while in December, 1908, we were supplying fourteen public stations, which used during the year 301,279 kilowatt hours, giving us an income of \$9,065.93, or 3 cents per kilowatt-hour.

The above figures show that our income from the private charging stations has increased 82 per cent in two years, against an increase of 38 per cent for public charging sta-



J. T. Hutchings
Rochester Ry. & Light Co., Rochester, N. Y.

tions. While, to produce this increase of 82 per cent in income for private stations we furnished only 74 per cent additional current, on the other hand, for the public stations we were obliged to furnish 73 per cent increase in current for an increase of only 38 per cent in income. The motive in making the lower price per kilowatt-hour for public charging stations was the desire to eliminate competition from isolated plants and to encourage the use of current between the hours of 9.30 a. m. and 6.30 p. m.

It being granted that at a fair rate the sale of current for the charging of batteries for vehicles is desirable and profitable business, the question arises—what attitude should the central station take to encourage this business? The first thing that comes to mind is the granting of special low rates for the current used. This has undoubtedly assisted many companies to create a considerable business in this line. From our own experience, however, we have found that a low rate is not the greatest incentive to an increase in business.

As the batteries have previously been handled by our consumers, the electric vehicle owner has been using too much electricity and has paid the company too much money therefor, the larger part of the current having been used to the detriment of his storage battery. A low rate for current induces carelessness on the part of the customer as to the manner of use.

We find that what we most need is a campaign of education, which shall increase the customer's knowledge of the proper methods to be pursued in charging his battery and handling his vehicle, bringing home to the consumer the fact that if the vehicle in operation uses twice the amount of current that it should to do a certain amount of work, owing to friction, bad alignment, and the

like, the work actually done has decreased by more than 50 per cent, and the life of the battery by more than that amount.

Our company has for some time appreciated the value of these features and some of the difficulties that the vehicle owner labors under in getting satisfactory service out of the electric vehicle. For this reason we organized on the first of March of this year a department to give this matter special attention, and have placed in charge thereof a competent engineer of wide experience in the handling and maintaining of batteries. Investigation by this department thus far has shown conditions to be even worse than we had anticipated.

The department found that the principal carting and trucking firm in our city had two electric trucks, which had not been in operation for eight months. These trucks, properly operated, should give us an income of from fifty to sixty dollars a month. The owners stated that the only reason the trucks were not operated was the excessive cost of maintenance and their unsatisfactory performance.

In order to place these trucks again in commission the department made this proposition to the owners: That we would fit up the two trucks in A-1 condition, and that if, at the end of sixty days' trial, the owners were not satisfied with their operation there would be no charge for the repairs. If, however, the trucks were made satisfactory, we would charge the owners for only the actual material used, making them a present of the labor and current used in putting the equipment in first-class condition.

The two vehicles were put on the street and have been in operation for two months, with the result that the customer has paid us \$1,000 for the material used and is seriously considering the purchasing of ad-

ditional electric trucks. The superintendent of our electrical vehicle department gave this installation his particular attention and after the vehicles were placed in commission gave personal supervision to the charging of the battery. On comparing notes he found that whereas under his supervision it was necessary to give the battery only 40 ampere-hours charge on a particular day, under the former operation and for the same conditions of running a charge of 180 ampere-hours had been used, 140 of which had been wasted and had served only to decrease the life of the battery through the softening of the plates.

To cite another instance: A woman owning a runabout had taken this machine to a number of different garages for repairs, and in each case it had been brought back in worse condition than before. She was absolutely disgusted with the entire proposition, and we learned that she was negotiating for a gasoline runabout. Our superintendent saw this woman personally, and she stated that if the runabout could be made to run fifteen miles satisfactorily on one charge she would be very glad to pay any reasonable amount for the repairs, but that if he found that he could not do this she would be glad to make him a present of the vehicle to get it out of her sight. A careful inspection of the outfit showed that the controller had shifted in such a manner that whenever it was used the battery was practically short-circuited,

also the battery was found to be badly sulphated. The vehicle was brought to our shop, the controller repaired, and the battery re-formed. Our superintendent then took the owner for a drive of twenty-five miles, and she was so pleased with the operation of the vehicle that she requested the privilege of sending all of her friends who owned electrics to our repair shop.

The writer does not wish to give the impression that it is the general practice of our garages and repair shops in Rochester to do poor work. We have in our city, I believe, as good men doing this work as in any city of corresponding size, but the trouble is that the repair shop is not sufficiently interested in the successful continuous operation of the electric vehicle, looking only to the immediate returns for the individual repairs.

It is this careful attention to minute details that makes the success of the electric vehicle possible, and if these details are followed up there is no competitor to the electric vehicle in its own proper field.

My advice to the central station manager would be that he take the electric vehicle situation seriously and give it the same attention he has given the sale of electric power, outline and display lighting, and heating appliances. If he does so he will find the electric vehicle a better medium for the sale of his product than any that has previously been brought to his attention.



PRACTICAL ILLUMINATING ENGINEERING IN CONNECTION WITH A COMMERCIAL DEPARTMENT

G. A. SAWIN

THE operating man has not hesitated to discard old methods and apparatus for improved ones. He has freely spent money on his plant. He has even in many cases furnished free renewals of incandescent lamps in order that lamps of poor quality may not be used on his circuits. But after his prime object is accomplished, after spending his money, thought and energy to place his product where it can be used, he drops it entirely, saying in effect, "Here it is, do as you please with it."

I think there is no case parallel with this in other manufactured articles. The manufacturer of electrical apparatus, for example, will specify the conditions of installation and operation, he will follow these features carefully, his object being to avoid anything that might prove detrimental to his machine, and by these methods he does much toward eliminating complaints. Why should not the manufacturer of electricity do likewise, specifying how the lamps should be used and where; and would not this practice tend to eliminate complaints?

After the manufacturer of an electrical machine receives a complaint, he will examine it in all details, paying special attention to location and capacity. After the manufacturer of electricity receives a complaint on poor lighting, he will send a man

to test the voltage, and if this is correct he will do nothing further. The trouble may be entirely with the location of the lights or with the capacity or quantity of light, and the trouble not being corrected will leave a dissatisfied customer.

The progressive commercial man is spending money for solicitors, newspaper advertising, signs, and the like, to show his product. He virtually says to the customer, "Use electricity; we don't care how, only use it and pay your bills." The salesman of practically any other article is full of suggestions as to how and where to use his product to get the best results; in fact, a salesman without this information would sell few goods. Would not the salesman of electricity be assisted in selling his article by telling how and where to use it? The feature lacking in the method of both the operating and the commercial

man is illuminating engineering.

Many places where the illuminating engineer can be of assistance readily suggest themselves: He can consult with customers complaining about their light and supply the remedy; he can often save consumers who think their electricity is too costly; he can prove to non-users that the cost of electricity is within their means; he can consult with new customers on locating light, thus preventing future dissat-



G. A. Sawin
Meter and Illuminating Engineer
Public Service Corporation of New Jersey
Newark, N. J.

isfaction; he can assist in obtaining new business by showing where electricity can be used advantageously, perhaps in place of other illuminants. It is not uncommon to hear the statement, "I do not use electricity, it hurts my eyes." The trouble here is not with the light itself, but with the location of the light. Now that the tungsten lamp is being used extensively, its higher intrinsic brilliancy makes the question of location of lights still more important. It is not inconceivable that a customer may on the score of injured eyes cease using electricity; in this case the illuminating engineer would be of assistance in so placing the lamps that a customer's eyes were not affected. Is not this feature of light injuring the eyes actually hindering the increase of business, and could not the people be converted by having the light properly placed? Here is another field for the illuminating engineer, where a company could use him to advantage. In short, the illuminating engineer supplies the one missing link between the central station and the consumer, rounding all into a perfect whole.

The company should advertise the illuminating department extensively through newspapers, electric signs, pamphlets, on the back of bills, and the like. In its advertising, the company should state that the department is at the service of all, without charge. Besides the cases which come to the notice of the department through advertising, the complaint or information department should notify the illuminating department where customers complain of high bills, poor lighting, and the like. The knowledge that the company maintains such a department would be of great assistance to the agent in settling complaints. Care should be exercised to bring to the attention of every new customer the fact that the com-

pany maintains an illuminating department and is willing to advise him before he is connected to the lines. New buildings being erected will of course be known to the commercial department, and they should make it a point to confer with the owner and architect to see if the illuminating department can not be of service to him. In short, all branches of the commercial department should have the illuminating department in mind at all times, and the organization should be such that notice of advice wanted on illumination automatically reaches the department from all angles.

The illuminating engineer should be equipped with all available magazines and technical papers, catalogues of fixtures, shades, and the like, and should keep strictly up to date on all points. He should have one or more portable photometers, and should compare calculated results with measured results with great detail.

At the end of each month every inspector should report the result of his follow-up system, stating whether the customers were satisfied or not and objections raised. The department should make every possible effort to satisfy the customer, this being the principle object of the illuminating department.

In conclusion we would say that the object of the illuminating department is, briefly, to assist the company to sell its product, to hold its present consumers, to eliminate complaints and to establish friendly relations with consumers. The department, if properly operated, will do excellent work in these directions. The company should bear in mind that if it does not establish such a department or if it does not operate such a department in the interests of the consumers, before long some independent illuminating engineer will find that district a good field for work. This will

doubly react against the company, since new customers obtained by independent means would either be neutral or dissatisfied in paying for

a service which other companies furnished free, and the company would get no credit for help given present consumers.

PRIVATE POLICY

PAUL LUPKE

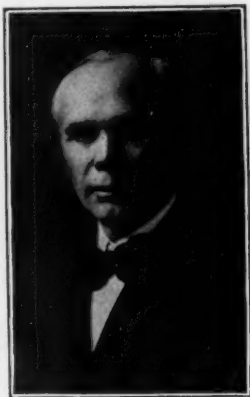
SUCH ample stress is now being laid upon the necessity for establishing and maintaining a correct public policy that it would seem to be superfluous to dilate upon it here, but a little serious thought must readily convince us that the most elaborate public-policy structure will in the end prove a mere castle in the air unless it rests solidly upon the rock bottom of an unassailable private policy—that is, on prudence and wisdom in the management of the private affairs of our interests.

To carry on our business we must provide a plant and hire men to operate it, and the sum and substance of our private policy should be to provide the right plant and the right men. Assuming that we have provided the best plant warranted by the conditions, it is next in order to maintain an operating force that will do it justice, for without that all our efforts will be set at naught. Theoretically, there are two ways of making a station fool-proof; one is to make all its apparatus proof against fools, and the other is the elimination of the fools. Yet we must hire men as they are, and the only way of having things as they ought to be is to do our level best to get them there. The efficiency of an organization depends upon the degree in which its individual members, down to the

last man, recognize and live up to the mutual obligations their respective positions impose upon them. Evidently, the first thing to be done, then, is to make all understand what these obligations are. This can not be accomplished in a day by merely passing around the word, nor by laying down inanimate rules; it is a matter of education and therefore, without doubt, a slow and tedious process; indeed, altogether too slow a process unless the utmost caution is exercised in securing proper material to work upon.

If you have succeeded in securing ambitious, tractable men the accomplishment of the desired end is largely a matter of good example, opportunity for improvement and free interchange of ideas, and the things that stand in its way are indifference and injudicious treatment.

If Darwin's theory is correct, a well-developed sense of imitation should be ours by right of inheritance, and it is. However, the example you set must not be superficial or spasmodic, but a sustained, quietly enthusiastic devotion to duty for its own sake. Only that kind of example will penetrate below the skin. Thus, for instance, the example of honesty practiced for the sole reason that it is the best policy (second-grade definition) has far too much mer-



Paul Lupke

cenary flavor to be effective. The load factor of your teaching of this class should be as near 100 per cent as possible. The effects of frantic revival peaks are not lasting; too many reconversions will be found necessary. All power is a push from behind, but to secure continuous acceleration there must be no let up to the push. To persist requires courage, that dogged courage that does not relax though progress seems imperceptible. It may also at times require a certain self-effacement, a sacrificing of oneself to the cause, but practically nothing intrinsically worth while can be done without that.

Now I hear the objection, as plain as if some one said it out loud: "What's the use? As soon as we have trained a man so that he is good for anything, he quits," Well, some do; but pray what good is a man to you, anyhow, who can not get a job anywhere else? It is just this short-sighted narrow-mindedness, this blind egotism, that works the mischief. When you force a man into a narrow path that in the end brings him face to face with a stone wall, would you expect him to bubble over with enthusiasm for his work? If you deprive a man of his chance for promotion he will either lose his ambition, degenerate into an automaton, or quit. I have no patience with mushy sentimentality, nor much sympathy for welfare work by the inquisition method, but it is time to break away from the practice that tends to make our man with the coal shovel a thing akin to the Millet-Markham man with the hoe. Intelligent boiler firing really is a college man's job; the only trouble is that the college spoils a man for the job. I know only too well that all men are not amenable to progressive influences, but if you have that kind it's your fault; you hired them.

We have a queer leaning toward

indiscretion in the distribution of praise and blame; exalting or condemning without much rhyme or reason. Such unwarranted proceeding must have a decidedly disintegrating effect. The distribution of praise or blame must be just, prompt and direct. In some cases the upper strata of a complex organization have the faculty of absorbing praise to the last drop, while blame sinks through to the bottom, gathering momentum as it descends. The lack of proper recognition of small earnest efforts of every-day faithfulness to petty trying tasks will prove a severe handicap. Of course, the most effective recognition will always remain plain, hard cash. Nevertheless, no man is made of wood, and the right word at the proper moment should not be neglected. So should blame be pointedly placed where it belongs. Carbon-copy kicks lack individuality. They miss their objective. The impression on the intended recipient is small, as he will generally manage to persuade himself that it was mainly intended for the other fellow. Promiscuous what-the-hell talk will only create surliness or vacancies. There are indeed occasions, especially in our business—though happily they are becoming rarer—on which nothing seems to be so all-comprehensive as one good round swear word, but generally it will be found that the useful effect of super-strong language increases with about the square of its disuse.

The whole problem of handling the employee might be pressed into one sentence—make a man of him and treat him like one. Then in times of stress and struggle your men will act like human beings rather than fettered units of an extraneous combination with a sprained reason, aided and abetted by an infractuous public opinion. And when you have your men with

you, handling a substantial physical equipment, the fickleness of the times can be faced with serenity.

Gentlemen, I am not blind to the fact that all I have said is old, for indeed if, at this late day, it were not old it could not be true. If here and there I have applied a dab of fresh paint I hope it may serve to attract attention to a matter that well deserves some serious thought. And having made a feeble and, I am afraid, a rather frivolous attempt to entertain you for a few minutes, may I ask your leave to add a few words in the plainest, soberest and most straightforward language at my command?

You send your sons to college and send remittances after them for four long years, and while the boys cram their brains with useful knowledge that is supposed to last them a lifetime, they are having the time of their lives. However, be that as it may, when they finally depart they bear away with them a diploma, beautifully executed in pompous Latin, adorned with the hieroglyphics of a long string of professors' names and decorated with the great seal of their alma mater. This diploma rightfully gives them an undisputed standing in their profession, and, provided the man can back up his parchment, it of necessity counts for much.

This Association, through its company branches and geographical section, has made great and successful efforts to enlist as Class B members a set of men heretofore not in direct touch with it. Yet, I venture to say that, notwithstanding this fact and even though, as President Elgin asserts, the very office boys are getting interested there are still thousands of our employees to whom the association remains an empty name, and there are still other thousands who have not even heard the name. The lower you go down, naturally, the larger the fee for mem-

bership will loom up, and, while you and I know well enough that it brings with it opportunities worth many times its cost, I nevertheless assert it to be true that a tangible, real, material, easily understood and self-evident advantage would at once bring into the fold many men not now approachable.

Let us suppose that the Association should establish a certain well-defined standard of trustworthiness and faithfulness to duty, combined with practical and theoretical knowledge for each and every class of men in the service of our companies; for firemen, engineers of various grades, switchboard men, metermen, linemen, lampmen, solicitors, foremen of departments, superintendents even—go as high as you like, but be sure to start from the bottom—and then, if a man has established his competency under this prescribed standard to the satisfaction of authorized representatives of this Association, issue to him a certificate or diploma as a graduate National Electric Light Association fireman, engineer, or the like, whatever the case might be. I recognize that this is a radical move, but I do not believe that such a plan is visionary; on the contrary, I believe that it is in line with the most progressive practical ideas thus far advanced for the rational education of employees.

In this Association you have an engine of vast capacity for good; you have under your control one of the best equipped of the universities of hard knocks. I further believe that, with the earnest co-operation of our Class A members, and with the aid of a well-organized system of company branches and geographical sections and the assistance of manufacturers and institutions of learning—which no doubt would be forthcoming—a working scheme could be arrived at that would not only enable our employees to make them-

selves worthy of, and to acquire the requisite knowledge to merit, the diploma, but would also so safeguard the integrity and intrinsic worth of these diplomas as to make them of undisputed and recognized value to their possessors. Furthermore, as the move would be national in scope, it could not help but be of material benefit to us all, by gradually creating a body of employees of superior intelligence and loyalty.

Not only that, but I am sure that a sincere and rationally conservative

effort in this direction would considerably raise our standing as public service corporations in our respective communities and affect public opinion in our favor.

I truly and honestly believe, therefore, that the plan I have so roughly outlined is worthy of your consideration, and I confess it would give me great pleasure at some time during this convention to listen to a motion having for its purport the creation of a preliminary committee, let us say, on Private Policy.

ELECTRICITY FOR DOMESTIC PURPOSES

MATHIAS TURNER, Editor

THE application of electricity for heating and similar uses in the home may be divided into two general classes:

- (a) Conveniences
- (b) Necessities.

Under the heading (a) are grouped portable water heaters, curling tongs, coffee percolators, bread toasters, heating pads, cigar lighters, fans, sewing-machine motors, sweepers, air heaters, and the like.

Heading (b) includes cooking outfits and laundry utensils, such as flat-irons and washing machines. As other articles are placed on the market they will group themselves under one or the other of these headings.

Under the classifications, cooking by electricity offers the chief source of revenue. Its demand is constant, unfailing, day after day and year after year. Yet scarcely any systematic effort has been made to develop this field. If the application of electricity for cooking had received as much study as its application to other domestic uses, electricity to-day would probably be competing with coal, oil and gas for its share of the cooking business.

There are a few devices for the kitchen that are in a reasonably per-

fect state and could be used in competition with gas or coal; but for all of the cooking we have not yet appliances capable of successfully competing on a large scale with coal or artificial gas, and least of all with natural gas.

There are three very serious drawbacks in the apparatus:

First—It lacks durability;

Second—It heats too slowly;

Third—It wastes too much current.

If the manufacturers' hopes are realized, the second of these defects will soon be eliminated. There are in reasonably successful use disc stoves consuming more than 50 watts per square inch of heating surface. These stoves are now undergoing life tests. Food may be prepared on them more quickly than is usual on coal or gas ranges; and in cheap utensils in common use, set loosely on the disc. Unquestionably, the heating element in most of the appliances for kitchen use should be in the form of a disc. If one should burn out, used either as a stove or as the heating element in an oven, steamer, or the like, the cook can quickly slip a spare disc in convenient 'bus-bars or other contact points, and proceed with her cook-

ing; whereas if a self-contained frying pan or similar appliance burns out the frying or other operation is stopped for the day.

The third defect — waste — has been partly overcome. A dry-steam cooker is available which can cook many food products simultaneously, and with a minimum amount of current. Also, new designs in ovens are nearing completion that may, taken in connection with the steam cooker, reduce the average current consumption for the entire family cooking considerably more than 50 per cent as compared to the current consumption of present cooking sets.

Lack of durability—will soon disappear. A few kitchen outfits including in their design these improved methods of utilizing electric heat are on trial, and it is believed that they will prove low in first cost, economical in operation, and far simpler and more convenient for the cook's use than any coal or gas range.

Small beginnings are being made.

In Cleveland, in addition to a large number of the electrical conveniences there are in use more than forty complete electric cooking outfits exclusively providing the meals for as many families. The average cost of cooking for each person per year at five cents per unit is \$13.65.

There are several reasons for believing that the day of electrical household development is breaking:

First—A large field of operation has been secured with the growth of residence lighting;

Second—Public interest has been keenly aroused;

Third—Great progress has been made during the last year in the manufacture of the electrical appliances.

It is the central stations, chiefly, that can hasten the development, as they are the ones that will devote the time to learn the requirements these appliances have to meet in the homes of their customers. It is not a simple problem of sale. It is a

question of creating a demand on the one hand and, on the other, of securing from the manufacturer adequate apparatus to meet that demand. Until the heating and cooking devices become standard and meet the requirements as to first cost, running expenses and cooking results, either the manufacturer must deal direct with the individual or the central station must undertake the work. With their well-organized outside solicitors, with their advertisements and demonstrations, the central station can sell this apparatus and, in selling, educate the public rapidly up to an electrical era in the home.

And the department store and other selling agencies should welcome this development by the central stations, and, instead of hampering, do all in their power to aid it; because, if electricity can be introduced into the average home to operate electric-heating, cooking, and other devices, in a few years' time the field will be very large, and the public will be so accustomed to the operation of electrical appliances that they will make their own purchases in the stores with the same intelligence as they now purchase other cooking devices and mechanical utensils for domestic use.

But if any one is to do much with this heating business there must be a field of operation. A large residence load is essential, as the installation of heating and other electrical devices will follow, rather than lead, the introduction of electric light in homes. The size of this development will largely depend upon the number of houses connected to circuits for light.

With the attainment of a large number of residence customers for electric light, the field for other uses of electricity will have been secured, and the use of electric heating and similar appliances can be pushed as fast as the manufacturers provide suitable apparatus.

The Story of a Successful Sign Campaign

By J. B. LINDL, SIGN AND POWER EXPERT
UNION ELECTRIC CO., DUBUQUE, IOWA

THE first step taken in the city of Dubuque to popularize electric sign advertising was to enter into negotiation with the two daily papers for an advertising exchange proposition, by offering to erect an electric sign on the office of each. We agreed to furnish current for operating the signs at the regular sign rate, in exchange for advertising space in the papers at the regular rate.

The cost of the sign was added to the cost of current for operating on a flat rate from dusk until 10 p. m., each night for one year, and the total divided into twelve installments, a bill being rendered and paid for by the papers each month. The papers in turn render a bill for the advertising each month, which is paid for by the company, thus putting the matter on a cash basis, and avoiding confusion in accounting.

The signs were erected at night between Saturday and Sunday, and in the Sunday issues of the papers appeared the following advertisement:

"Look at the New Electric Sign

which we have erected for the

Times-Journal."

Below this in small type,

"Newspaper men know good advertising when they see it. If electric sign advertising is good for them it is good for you.

"LET US MAKE YOU AN ESTIMATE."

The same advertisement appeared in the other paper, the Telegraph-Herald with the only difference that the name of that paper was given.

The advantage of having large electric signs on newspaper offices

is at once apparent when one considers the powerful talking point it offers, and the fact that a paper which has \$200 to \$300 invested in a sign is not likely to actively support any movement towards adverse and restrictive legislation or sign ordinances by the city council. Although the signs above referred to are

the largest in the city and as such a fortification for the company against attacks by the papers, there is still greater advantage in the friendly feeling of the press toward the company on account of the increased advertising which comes to the papers as a result of the company's example in using big space.

In addition to the newspaper advertising, the following circular letter was mailed to 500 business



J. E. Lindl

houses so as to reach them in the Sunday mail.

Dubuque, Iowa, Sept. 19th, 1908.

W. L. KLEIN & Co.,
1838 Couler Ave.,
City.

GENTLEMEN:

You will certainly agree with us when we say that advertising is the life of trade. The very fact that such companies as Marshall Field, Swift Packing Co., and other equally successful merchants say that their advertising departments are the most important branch of the business should convince you. So many great commercial enterprises have been built up by advertising, and so many non-advertisers have failed that but one conclusion can be reached, and that is—"if you wish to succeed you must advertise."

We, in turn, agree with you when you say that every business cannot go into publicity on as extensive a scale as these firms, but every business can INVEST the same percentage of its gross revenue in BUSINESS BRINGING PUBLICITY, and MUST do so if it wishes to keep on growing.

Now let us consider the best medium for bringing a business before the public. The newspaper is the oldest and best known means, but within the last three years a new and more effective medium has been brought into prominence—The Electric SIGN, which has many advantages over other forms of advertising, chief of which is the low cost per prospective buyer reached. For instance a sign, costing say \$12.00 per month, will be seen and read by thousands of people, where with \$12.00 worth of any other kind of advertising you will hardly reach hundreds. Then, too, the Electric Sign brings your business before the people at a time when they are on the street, and are at leisure to consider your line and when they are there for the purpose of doing business. That is an ideal combination, is it not?

The fact that we have closed a contract for a sign with the two daily papers should convince you of the value of electric advertising, and good advertising is good for any business.

We have recently commenced building signs and find that we can build them for

about one-third less than the sign companies charge which, since the holiday season is near at hand when you get the best results from your advertising, makes this the time to start burning your name and business into the minds of prospective buyers. Don't fail to mail the enclosed postcard for further particulars.

Yours very truly,

UNION ELECTRIC CO.
Per J. B. LINDL.

Not knowing about the signs, as they had been erected at night, some of the merchants considered the letter a joke or an advertising dodge, but when they came up town the next evening and saw the two monster signs up against the skyline, they found that the reference to the signs was true. On Monday morning there were five postal inquiries on my desk, although I had been told that there would be no results from the letter. Four more inquiries came in during the day, and out of the nine inquiries received, four signs were closed.

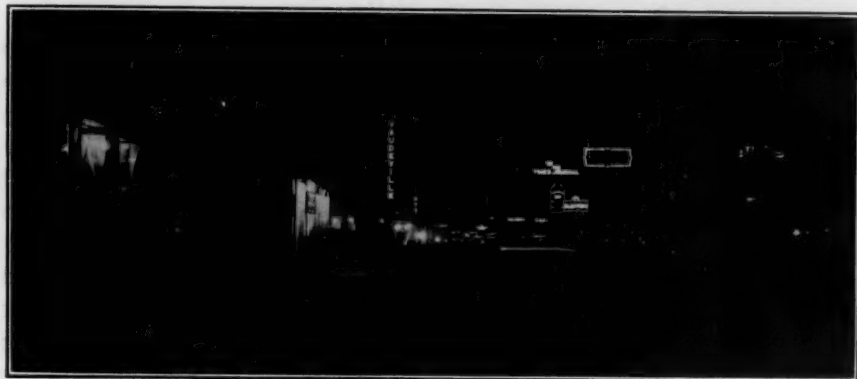
The method employed in selling these as well as the test of the signs was to sell advertising, not signs, for nearly every merchant believes in advertising. For instance: when we received an inquiry from a prospect, we drew up a design, made an estimate on the cost of construction, and erection, added to this the cost per year of the current to operate same on a flat rate, divided the total by twelve, and made the merchant our proposition. If, for instance, the cost of the sign was \$96, and it took 80-2cp. lamps to illuminate it, we would make up the following figures—a 2cp. lamp burning from dusk until 10 p. m., or 120 hours per month at 6c per kwh., figures \$1.20 per year, or \$96 per year for the 80

lamps; adding to this the cost of the sign as above, we have \$192 divided by 12, which gives \$16 per month for the first year.

We would then call on the merchant and draw his attention to the advertising value of an electric sign by showing him that with the sign he would reach everybody within three blocks of his store at a time when the people were at leisure to read his ad. We would further show him that with \$16 worth of this kind of advertising he would

started, as most of the merchants make a monthly charge to advertising, and if the total first cost of the sign was to be charged to advertising in one month it would leave the account for that month out of all proportion to the rest of the year.

After these four signs had been erected we were ready to commence the campaign in earnest, and we sent out another circular letter drawing attention to the four most progressive and up-to-date merchants and the valuable advertising



Dubuque, Iowa, looking South on Main Street from Tenth Street

reach almost the entire population of the city, at least once a week, where with \$16 worth of newspaper advertising at 15c per inch, which is the rate in Dubuque, he would only have four inches of space. As it does not take a very keen insight into the advertising game to see how much chance a four-inch ad has of being seen and read, as compared with an electric sign, it is not a hard matter to close a deal for a sign provided the merchant is at all progressive.

Dividing the first cost of the sign up into twelve payments helped us a great deal in getting the campaign

they were getting out of their electric signs. As no merchant wants to be called a back number this brought in another lot of inquiries, and from that time on we were able to close all the way from one to three signs per week. This brought us along towards winter, and about that time a movement was started in the papers to "Boost Dubuque." We took advantage of this by embodying in our advertising the fact that nothing could be more of a boost to the city than to have the main street so well illuminated with electric signs that it, like

Broadway, could be called "The Great White Way." This appealed to the civic pride of a number of the merchants, and brought them to a point where they were willing to put their signature on the dotted line.

One of the best pulling ads of the entire campaign was run at this time and it read as follows: "Life and Light start with the same letter. Commercially they are synonymous. There is always life in a well lighted city. Be a live one and boost Dubuque by advertising with an electric sign."

Diagonally opposite on the same page of the paper appeared the following: "Dead and dark start with the same letter. In a commercial way they stand for the same thing. You never saw a lot of people walking up and down the dark streets of a dead town looking at goods in a dark show-window. Don't be a dead one, but boost Dubuque by advertising with an electric sign."

By this time twenty signs had been erected and one could see a constant increase in the crowds on Main Street in the evening. This was again fired at non-users of electric signs in newspaper advertising and circular letters, with the result that every merchant in the city was willing to talk electric signs whereas six months ago it was almost impossible to get a hearing on the subject. All this goes to show what a systematic advertising campaign can accomplish, and also that by persistently, consistently and enthusiastically bombarding the public with arguments in favor of what we have to sell, even the most recalci-

trant and stubborn prospect can be converted into a profitable customer. I say profitable customer, because in my mind there is no better business for the central station than an electric sign burning its full demand for four hours a day; for where can you find an installation, either inductive, or non-inductive, that will give you as good an income per kilowatt connected per year, as an electric sign?

Up to the middle of February we had been building our own signs, as we could build them a little cheaper than other makes were sold here at the time, but after we had erected quite a number of them we found that having too many signs constructed on the same general plan, would in time wear off the novelty, and thus cause a falling off in the business. In order to avoid this we entered into an agreement with a manufacturer, whereby they agreed to sell signs to prospects at a discount of 33 1-3 per cent off their list. Our company in turn paid them for the signs at a 40 per cent discount, thus leaving the difference between the two discounts to cover freight, cartage, and the risk involved in carrying the accounts, and we then gave the customer the same plan of payment as we did with the signs made by ourselves. This put new life into the sign business, as the manufacturer sent a salesman here to canvass the city, with the result that in three weeks nineteen signs were sold, bringing in a revenue of over \$1,300 per year. The advantage of having this agreement will at once be apparent when one considers that it means a free solici-

tor for the best kind of business a central station can get.

Since last October a total of forty signs have been erected aggregating 3282 2-cp. lamps, not counting a number of transparencies with from 1 to 10 16-cp. lamps. Most of these signs are operated on a flat rate of 10c per lamp per month, and of those that are on a meter three burn all night, so it is safe to estimate the income of the metered signs at 10c per lamp, thus bringing the annual revenue up to \$3,938.40,

and we are not nearly through yet.

In closing I wish to emphasize that all we have done so far is the result of advertising, that most powerful of all business stimulants, which has proven itself a producer of results in every branch of the Central Station New Business field. I am firmly convinced that if we want to increase our revenue in any department—be it sign, power, or residence business—we must advertise, ADVERTISE, AD-VER-TISE.



Dubuque, Iowa, Looking North on Main Street from Fourth Street

A Dollar Idea

By E. P. Kelly, Contract Agent
Butte Electric & Power Co., Butte, Montana



IT often happens in pool and billiard parlors the cloth on the table is torn. Necessarily the cloth must be repaired or replaced by a new covering. Without exceptions, a special mending tissue is used and a hot iron is employed to make it adhere to the cloth. Since few such places have anything but steam heat, they are at a decided disadvantage in doing their repair work.

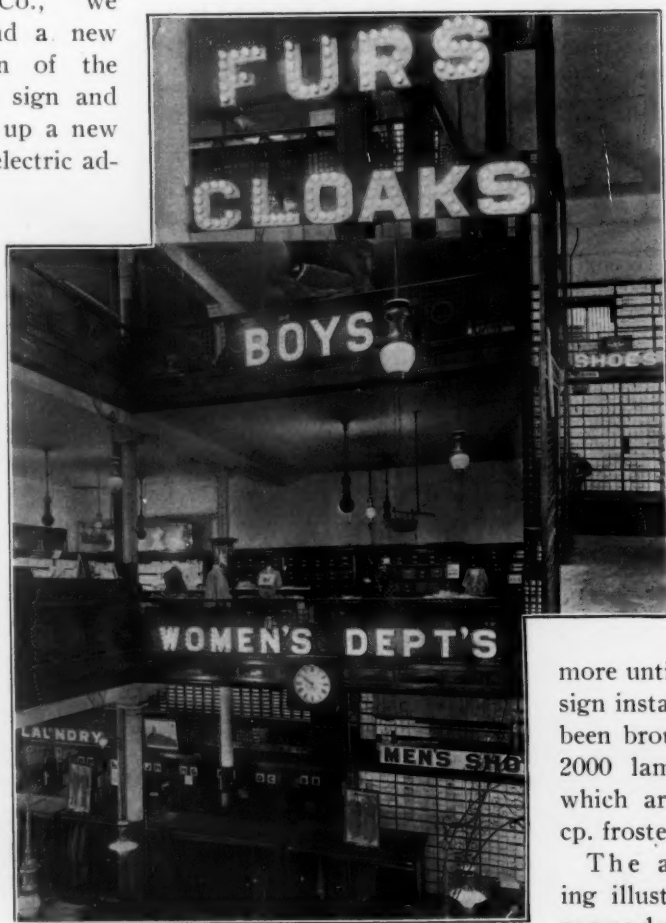
If solicitors would call on this class of business and show the advantage of having an appliance which they can heat almost instantaneously and at a minimum expense, they will without exception make a sale. Such has been our experience.

Indoor Electric Signs in a Minneapolis Department Store

An Installation of Lamp-Letter Signs Which Burns Day and Night

"IN a Minneapolis department store," writes Mr. R. W. Clarke of the Minneapolis General Electric Co., "we have found a new application of the electric sign and opened up a new field for electric advertising.

signs have been installed from time to time. The satisfactory results following each installation always called for



Electric Signs Indicating Departments in a Minneapolis Store

"The Plymouth Clothing House indoor electric sign installation, as it now stands, has been developed gradually; that is, groups of one or more

signs were burning at the time. In this installation are seventeen signs, each indicating the location of a department, and all so placed as to be

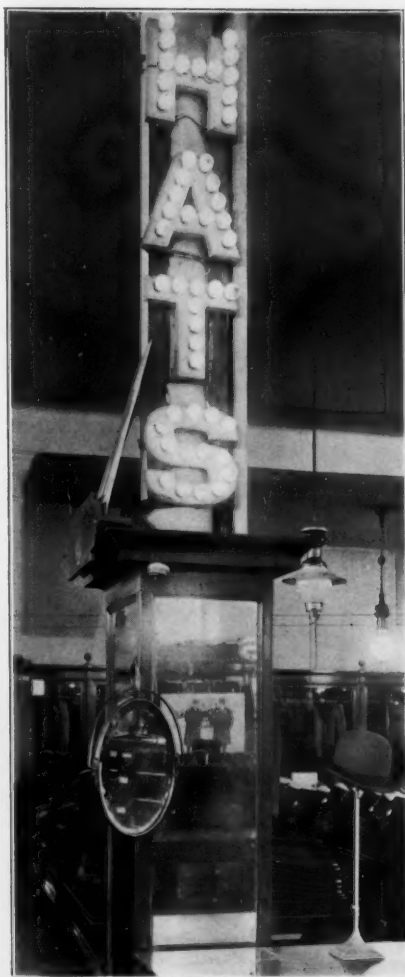
more until the total sign installation has been brought up to 2000 lamps, all of which are of the 2 cp. frosted type.

The accompanying illustrations are reproduced from photographs taken in daylight and the

visible as far as possible to persons entering the store. The modern department store in its vastness is a good deal of a puzzle, and we find our objective point as a rule with the aid of a floor-walker and as a result of sundry questions. Departments may be indicated by ordinary painted signs, but they must be either large and unsightly or hard to read and therefore inefficient. Moreover, the suggestive power of electric signs is of the utmost sales value.

A man who walks into a department store and asks a floor-walker where shoes are sold will not wait to be informed as to the location of the sixteen other departments in which he is not at the moment interested. It is very possible, however, that on his way to and from the shoe section, the appeal of the scattered electric signs may induce several other purchases, simply by reminding him of other wants.

Unquestionably there is a large field in prospect for indoor electric signs. The trend of the times is to-



Another Indoor Electric Sign



Outdoor Signs, Plymouth Clothing House, Minneapolis

ward centralization and department stores and big markets are on the increase. The central station sign man can spend profitable hours in develop-

ing this phase of the field for electric advertising.

The Minneapolis installation is a forerunner and points the way.

An Easter Window

JUST before Easter, The Dayton Lighting Company installed an "electric hen" and kept it stocked with "ready - to - hatch"

verted glass globe under which are metal shelves to hold the eggs, and two carbon lamps to supply the necessary heat. As the little chicks



eggs." A live hen was provided to receive and entertain the new arrivals while the incubator did the work.

The electric hen consists of an in-

are hatched out and gain strength they are taken out and entrusted to a natural mother. The whole process is visible and makes a most interesting window display.



State Regulation and Commercialism

BY GLENN MARSTON

THE fact that anything which affects the operation of a company in any way affects the commercial men in it is too evident to need assertion. State regulation has a very serious effect on all companies subject to regulation, though strictly commercial problems seem to be avoided by all state commissions. The commission contend, and rightly, that business responsibility lies with the managers of the companies, and that interference is justified only when this responsibility is flagrantly abused.

It is generally conceded that the powers of a commission should extend, under suitable safeguards, to the regulation of rates, service, capitalization, accounting and competition. Such regulation should be checked by an adequate and expeditious court review. Under these circumstances regulation is an advantage to the consumer, to the investor, and of course to the commercial man. A commission which fails in any of these features is a worse hindrance than no commission at all.

The greatest burden from the failure of adequate regulation falls upon the consumer. This makes it more difficult for the commercial

man to increase his sales. If regulation fails in any respect, it tends to weaken public confidence, and to a greater or less degree, strains the relations between the company and prospective consumer. It makes no difference whether a company is a monopoly or not—a certain amount

of business does or does not come to the company, dependent upon its public relations. The work of the commercial man is effective in proportion to public confidence—not in the individual company—but in the public utility business as a whole. It is because state regulation inspires public confidence that it is most beneficial.

The best example of the adverse effect

of state regulation is that of the state of Vermont, as the best example of effective regulation comes from Wisconsin. That there are defects in the Wisconsin law cannot be denied, but the general effect of the law has been beneficial. First and foremost, it has convinced the public of the folly of competition. It has shown that a commission gives the public the same advantages in rates and services that could be secured through competition, while doing away with the enor-



Glenn Marston

mous waste of capital and increase in fixed charges due to duplication of equipment. It is self-evident that these increased charges have to be met where competition is permitted, and that they must be provided for in the rates. The Wisconsin Commission justifies its existence on this one ground. It assures the safety of an investor's money, it assures him of a reasonable profit so long as the company treats the public right. It assures the commercial man's prospect that he can buy current at a rate that is commensurate with its cost, and, by inference, at a cost low enough to warrant his purchasing it. From this standpoint the commission is the electric salesman's assistant.

In Vermont conditions are different. A bill has been passed, over the opposition of the leading public service companies, which is the weakest excuse for regulation ever allowed to slip through a gullible legislature. The backers of the bill are said to be the independent telephone interests and a few others who do not care to have their business subject to legal restraint. Aside from the omission of a provision for uniform accounting, an end to which the National Electric Light Association has worked for years, the worst feature of the Vermont bill is the section—aptly numbered—which reads as follows: Sec. 23. Nothing in this act or previous statutes shall be considered as giving the public service commission power to prevent or restrict competition or limit the number of persons or companies who may engage in the busi-

ness of furnishing light, heat, power, or any other business subject to supervision under this act in any town.

It is difficult to understand how intelligent men could permit themselves to be induced to consent to such a clause. The failure of competition to prevent real or imaginary evils in public utilities has been demonstrated time and again, and the principal effort of recent legislation has been to provide an adequate substitute. This has been the basic purpose of commissions. Vermont wishes to be in style, so a commission is created—along lines of reasoning similar to those of the colored gentleman who says "Mr. Johnsing" because his employer says "going". He reasons that if "goin'" is wrong "Johnson" must also be wrong. Vermont assumes that if other states have suffered through the lack of a commission, she will not—and creates one. Whether the commission is useful, or acting along proper lines is a secondary consideration.

An interesting side-light on the reason why the Vermont commission was not given power to regulate competition was thrown by State Senator Corry in a meeting in Montpelier shortly after the bill was passed. He boasted of the ineffectiveness of the bill. His remarks can be more readily interpreted when it is understood that he was, at the time of the bill's consideration, in the midst of the construction of a competitive lighting plant in Montpelier. "That's why we passed it," he said, when the character of the

bill was mentioned. "If it had amounted to anything we wouldn't 'a' let it go through. We want competition here, and we aren't goin' to let any public utilities commission run our business!"

The effect of this bill is serious to the customer, because it prevents expenditures on the part of companies in contemplation of future requirements. It is certain to restrict the development of properties, and therefore will restrict their usefulness to the public. It is idle to suppose that a company will make a large investment to serve a new territory, or to better serve an old one, when its efforts may be set at naught by the entrance of competition which is as likely to be of the hold-up variety as honest.

Such restriction of development is a direct handicap to the commercial man. It prevents a broadening of his field commensurate with his ability. It restricts his activity to fields where consumers can be taken on without investment expense to his company. While it prevents extensions to serve people who want service, it prevents his covering that new territory for people who may be induced to take service.

The community at large suffers

from inactivity on the part of the electric company, because electricity, as one of the great sources of industrial power, has a decided effect on the location of new industries in a city. The introduction of competition does not secure permanently reduced rates, and the manufacturer contemplating a new location knows this. He will not choose a city where power rates must ultimately go up—where he must pay, in his rates, unnecessary charges as well as for the losses due to competition from which he did not benefit. He will choose the city where he is assured of steady rates, based on the cost of production, subject to reasonable and adequate regulation.

State regulation, to be of value to the commercial man, must be of value to the consumer. It must protect the public and the company alike. It must be efficient and cover all phases of the business, from the granting of franchises and permits to the form of accounting. If it fails in any one of these particulars, if it does not fully protect both the companies and their customers, it is worse than useless, for it imposes false economic conditions that must inevitably be detrimental to the interests of the whole commonwealth.



Right Thinking—Right Results

MORGAN J. LEWIS, NEW BUSINESS DEPARTMENT
EASTON GAS & ELECTRIC CO., EASTON, PA.

THE most wonderful and powerful thing extant in the world today is mind. It not alone conceives—it has the power to complete in tangible form the creative suggestion. It is the potential factor in all man's efforts to advance, excel and succeed, no

chandise is undemonstrated service. Therefore we find it pertinent to prescribe this mind building formula for new beginners and also for those who have not as yet achieved real success as salesmen.

This treatment will produce in any man a 100 per cent salesman, for in

B

- | | |
|------------------------------|------------------------------|
| 1. Optimism, 10% | 6. Promptness, 10% |
| 2. Enthusiasm, 10% | 7. Alertness, 10% |
| 3. Appearance, 10% | 8. Honesty, 10% |
| 4. Energy, 10% | 9. Sincerity, 10% |
| 5. Courtesy, 10% | 10. Knowledge, 10% |

Mix with equal parts of wisdom—the tact that knows when and how to employ each quality—and apply with courage.

matter in what work he may engage.

There is no study that requires “mind power” so constantly and essentially as salesmanship. There is no phase of salesmanship that is so exacting of this mental strength as the truly successful selling of the central station product, where the mer-

these you find Mind-Power and Success.

(In order that the reader may be fully impressed as to the merits of this Mentalizer, we would advise him to consult a first class dictionary as to the specific meanings of the various ingredients.)

A Dollar Idea

By H. A. Schmidlapp, Con. Agt.
Butte Electric & Power Company, Butte, Montana



WE sell electric irons to the proprietors of boarding houses, hotels, and rooming houses, and suggest that they rent them to their customers for twice the actual amount of the consumption per hour.

In every boarding house there are single men who press their own trousers rather than pay the tailor's price. The cost of the iron at such a rate would be insignificant, but it would be a great convenience to the boarders and save the proprietor the annoyance of heating and loaning the old style flatirons.

"Tactful Relations With Customers"

I. GETTING NEW ONES

BY HERBERT ALDEN SEYMOUR

[This is the first of a series of stories,—satires on that species of commercial hypocrisy which masquerades as tact. They must not be construed as cynical reflections on the intelligence of the average central station "domestic prospect" and therefore in poor taste. Mr. Seymour knows the new business man's job from both sides and aims his shafts at those overwise "diplomats" who lose through over-confidence and undervalues.—EDITOR.]

A N old solicitor was posting a young one, a new member of the contract department:—"Never forget, my son," said he, "that in the residence districts tact is essential to the signing of many contracts."

"You bet!" replied the neophyte with conviction.

The older man sighed. "It takes time to cultivate the kind of tact I mean," said he. "Of course you are already measurably successful, because nowadays people hunt you up after you have retired for the night, begging for contracts to sign, whereas when I entered the game the average flat dweller was so shy of electricity that we had to approach behind cover from the windward, and hunt in pairs occasionally. Those were the days when solicitors were chosen for their prepossessing personality and their distinguished deportment."

"What does that mean?" asked the youngster.

Ignoring the question his mentor continued: "As an illustration of the tactful method of going after a contract in a flat building, let us suppose that you have rung the bell

from the vestibule and are waiting at the speaking tube."

"Yes," exclaimed the other, "and then some fool hired girl comes and blows down the tube with all her might, and you got an ear-full. I know. I listen from the other side of the vestibule now."



The old war horse smiled. "You are a bright youth, and learning rapidly," said he. "But to continue, suppose that you give the intelligent hired girl, who has, as you say misapplied the pneumatic cleaning idea, a soft answer, and are permitted to invade the unenlightened home. The mistress greets you, in the front room—

"In a dressing sack with no buttons, you mean," interrupted the youth.

"With no buttons?" echoed the other, "Why, dressing sacks never

have buttons. Never. They are always clutched, spasmodically. —'In the front room' I said—Here you have your opportunity to make your errand plead its own cause from the start, for if there is a 4 x 8 alcove off this room your first move, after stating that you represent the company, is to refer grandiloquently to the aforesaid alcove as the 'music room'. Of course that's where the piano is, unless it's fitted up as an 'oriental corner'. But if the piano is there you make a hit with that 'music room' euphemism at once. Do you get the idea?

"Then, having mentioned the unparalleled advantages of electric light in a music room, with a piano lamp, and so on; or the inimitable effect an incandescent in a brass can full of holes as a purveyor of Oriental atmosphere, if it is a corner with this tenant; you delicately lead the way and the conversation toward another room where you see a small bookcase in one corner, with several books in it, and a last night's paper in a chair. Now, if you have real tact, and the first glimmerings of genius as a salesman of electric light you seize the opportunity to call this the 'library'. If you have worked the 'music room' suggestion right, and can apply 'library' to some other room in the flat, you may now get your stylographic ready to fill in the name and the number of sockets.

"Whatever you do don't speak loudly in this sanctum of culture. The springhalt muse of rag-time and barn dance rhythms is not easily offended, but in the habitat of 'Ouida', of 'Laura Lean Jibby', of

the 'Pink Book' and the 'Evening Gasp', all should be hushed in reverent awe. So here speak softly and carry a fountain pen. If you see in this room a daguerreotype of the lady's paternal ancestor taken through his whiskers, identify it immediately as Charles Dickens. Don't hesitate. If, on the other hand, the gentleman has a fierce mustache, with the accent on the 'mus'. and unquestionably followed the wild free life of a cow puncher, recognize Mark Twain—instantly. It's good for a flatiron. Incidentally, of course, mention a reading-lamp, with 'art-glass shade' and a 'Verde antique base' and a chain-pull socket. This is rough on the absent husband, who will have to pay for one before long, but it is unavoidable. Of course, when they get it they will stick it on a little table as close to the window in the front room as they can, instead of putting it in the 'library.' But this is, after all, a harmless vanity and means income, as it will always be lighted so that strangers in the street can see it. Then, too, the 'pink book' and 'gasp' can be moved in there if necessary.

"The dining room is a cinch. All you have to do there is to laughingly mention chafing dish parties welsh rarebits, percolated coffee, and toast made on the table, and show how easy it is to attach the various electric utensils to the fixture. The lady may never buy a single one of them but she instantly thinks she will, particularly if you can say that the prices of some of them have recently been reduced, and she hangs upon your lightly spoken word from now

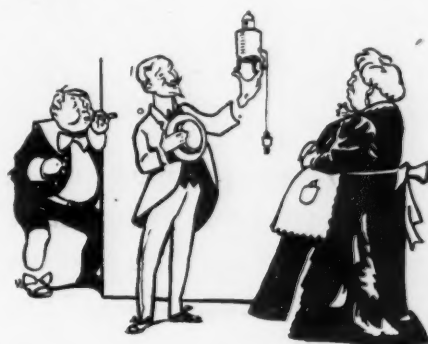
on with bated breath. Remember that 'hostess', 'presiding', 'house-guest', and similar words that recur frequently in the society columns of the newspapers are to be brought into the conversation at all hazards. 'House-guest' is particularly effective in flats. You should memorize a list of these, as they flutter the hearts of all members of the gentler sex.

"You do not need to consider the bedrooms, but should you see one of these without a bed in it, that is your cue to exclaim 'sewing room' admiringly, and descant upon the immeasurable relief and convenience afforded by a sewing machine motor-drive; and don't forget the 3-lb. or 4-lb. sewing-room iron—attaches to any socket: so handy for the seamstress or dressmaker. Do you get that—dressmaker? Well, hang on to it. I have known that little word to be good for 20 sockets.

"When you come to the kitchen it may or may not be tactful to urge the use of an electric flatiron. For instance, it is a mistake to do so if the mistress of the house is some pouting beauty who divides her time between her mirror and powder puff and the retail shopping district, and maintains a servant. In that case let the hired girl and the free trial take care of the electric flatiron later on, when, if they care to keep the girl they'll keep the iron. Talk an electric curling iron instead. But if the mistress is a thrifty, and strong armed person, and one who does much work herself, paint the horrors of ironing with the old kind of torture implement in fiery language, and start

the perspiration. Draw the contrast, of course.

"And, by the way, forget those plebeian terms 'hired girl' and 'kitchen mechanic'. Never use them, even in joking way. When a solicitor for electric light is talking to the mistress of a six-room flat, particularly if she is a Mrs. Newlywed, the only permissible terms for the servant are 'maid', or 'cook', unless you see her at work in a bedroom or elsewhere in the front of the apartment, when you might possibly refer to her as 'the second girl'. But this should be done judiciously and never when talking to a strong minded woman.



"If you see unmistakable evidences of there being children in the family you can locate a 'nursery' somewhere, even if you have to find it on the back porch. Under these circumstances the baby milk warmer is a safe play, especially good if the children are 10 to 14 years old and not present. Don't laugh at that as if I were joking. I mean it. And if there is a dear old grandmother your remarks on the value of a heating pad will be doubly efficacious, particularly if she is present.

"In general, you will find that delicately flattering suggestion and a complimentary attitude throughout will make a customer more surely pleased, and more thoroughly satisfied ever after, than anything else. Don't talk electric light as being cheap but as being good, and therefore necessarily a matter of course in such an excellent establishment."

"I'd like to see you doing all this in some of the flats in my district," said the younger man. "You'd get it where the chicken lost his voice."

"You have much to learn," replied the other. "Get the idea, that's all. Tact, in our business, is everything. I may have exaggerated in one or two particulars, but, as the German comedian said, 'many a truth is spoken from the chest.'"

A Dollar Idea

By G. G. Wilder, New Business Department
Tri-State Light & Power Company, Galena, Ill.



WE recently opened up a commercial lighting system in this city and in order to stimulate interest among the people and add consumers to our lines, we hit upon a rather unique scheme, the results from which so far have been more than gratifying.

We placed in one of our show windows a large map of the city mounted on a wooden frame, and having a number of incandescent lamps arranged behind it so that any hole in the map shows up as a brilliant bright spot. Whenever we have signed up a new consumer he is located on the map by a new hole. Above the map we have outlined the words "Galena's Bright Spots, Watch them Grow." When the lights are turned on at night each spot shows up brilliantly on a dark background, showing distinctly the location of each subscriber.

This little device has created a great deal of interest and keeps a crowd around the windows in the evenings.

Toledo Street Lighting

By T. D. BUCKWELL, CONTRACT AGENT
THE TOLEDO RAILWAYS & LIGHT CO., TOLEDO, OHIO

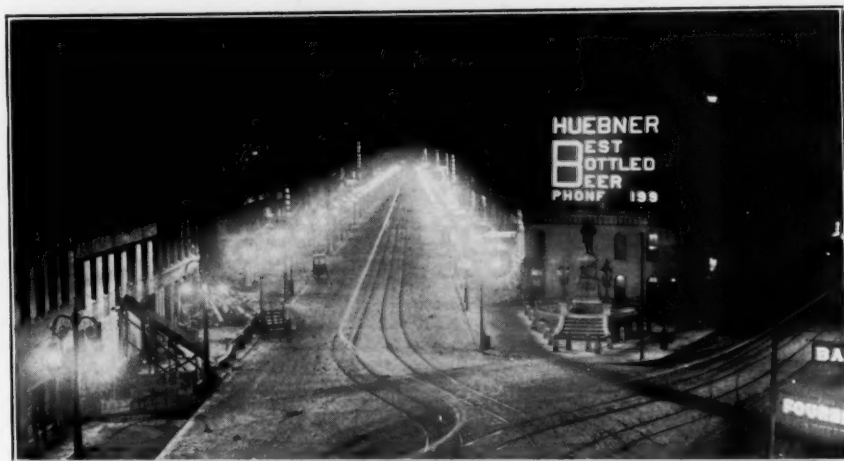
PRACTICALLY all the street lighting in the city of Toledo, Ohio, is now done with the luminous magnetite arc, there being about seventeen hundred of these lamps installed. In the residence and outlying districts of the city, the lamps are spaced approximately 600 feet apart, suspended over the street at a height of about 25 feet.

On Summit Street, one of our main business thoroughfares, we have recently installed a system of decorative lamp-posts, each mounting two arcs, as shown in the illustration on this page. A petition was circulated among the property owners fronting on this street, appealing for a better street illumination. This petition was signed by them, submitted to the Council and carried; the property owner to pay 85% of the cost of this special light-

ing, which is assessed against him pro rata according to the front footage of his property.

After the Summit Street lighting was installed the merchants on other streets wanted the same, and they immediately commenced to get out similar petitions. We now have three other streets with the same kind of lighting and two more streets in legislation.

The lamp-posts on Summit Street are placed about 80 feet apart with two magnetite arcs to a pole. There are 158 lamps in all, the system extending for a distance of about seven blocks. On account of the shades or reflectors used with the magnetite lamp, the light is thrown on the street and sidewalks, and does not hurt our field for electric signs. The stores seem to be lighted to just above the first story, and



Magnetite Arc System, Summit Street, Toledo, Ohio

with the electric signs placed above the first story, they are very attractive.

The other picture on this page is of our County Court House, situated in the heart of the city, and illuminated nightly with 98 arc

lamps, two on a pole. This picture was taken from the sixteenth story of a building two blocks away. This contract is written with the County Commissioners at our regular street lighting rates.



County Court House, Toledo, Ohio. Magnetite Arc Illumination

A Dollar Idea

By John G. Learned, Contract Agent
North Shore Electric Company, Chicago, Ill.



WE have been making a very strenuous campaign for flat rate window lighting business. There are merchants, however, who do not appreciate the value of showing their goods when the store is closed, and in each case we offer to rent the space at a specific price per foot per month, depending upon the location of the store. In the windows we put a drop curtain on which is shown one of our ads, the windows to be lighted at our expense. The merchants readily appreciate the fact that if their window space is good for us to advertise in, it is equally as good for them, and the result is that we generally get the business.

People Who WANT the HOOVER ELECTRIC SUCTION SWEEPER



No. 1. The June Bride

Each Mrs. Newlywed in your territory **wants** a Hoover Electric Suction Sweeper. It's up to you to sell her—and get the increased current consumption which these machines use.

The Hoover is an **improved** suction cleaner. It does more work and better work than the vacuum machines. It is light—can be easily carried upstairs or from room to room. It is low in cost.

The market for these machines is enormous—by a little effort you can place them in **over** half the houses on your circuits.

Newly married people, especially, are quick to buy. Young women are progressive—they're not hardened "slaves of the broom." A Hoover Sweeper that picks up scraps of paper, toothpicks, sewing threads; that doesn't gag at burnt matches or a cigar butt which has fallen on the floor; that takes care of crumbs in the dining room and gathers up the mud tracked in by a careless caller—a sweeper that does all this comes near to solving the servant problem.

Hoover Electric Suction Sweepers pay two profits—a profit on the machine and a profit on the current. You can have one or both of these profits—as you please.

We want Central Stations to demonstrate and handle our Sweepers.

We want Central Station solicitors to sell them on commission.

We want department and hardware stores for agents.

WRITE FOR OUR PROPOSITION.

The Electric Suction Sweeper Co.

NEW BERLIN, OHIO

In writing to advertisers, mention "Selling Electricity."

The Cleveland Electric Illuminating Company

*Sales Department: Number 232
Superior Avenue*

CLEVELAND, OHIO

*Distributors of Electric Current
for*

Light Heat Power

Doherty Operating Co.

(Organized originally to enable the highest degree of applied operating ability in the gas and electric properties controlled by Henry L. Doherty & Company)

The Doherty Operating Company is an organization of practical and experienced Operators, a corps of Specialists and Experts

Will undertake the management of other properties only upon a contingent basis of profit

Correspondence Invited and Treated Confidentially

Doherty Operating Company

60 Wall Street, New York

The Third Annual New York Electrical Show

will be held in the
MADISON SQUARE GARDEN, NEW YORK
October 11th to 21st inclusive

THIS year's show will have a large number of industrial exhibits, which will be of great interest to New Yorkers and also the many visitors that will be in town for the Hudson-Fulton Celebration.

The price of space will include all decorations, which will be a great convenience and saving to exhibitors.

For space write to

THE THIRD ANNUAL
NEW YORK ELECTRICAL SHOW, Inc.
124 West 42d Street, New York

In writing to advertisers, mention "Selling Electricity."

NEW

High Efficiency Reflectors

FOR

250 Watt Tungsten Lamps

THE large Holophane "high efficiency" Reflectors for 250 watt tungsten lamps are ready for market. They are designated as I-13, E-13 and F-13, being respectively the Intensive, Extensive and Focusing types, which will supercede the old B-6.

Customers are requested to copy the following data on these Reflectors into their price books or add it to Bulletin No. 25, which is devoted to the "high efficiency" line:

Designation	List Price	Standard Quantity	Number in Box	Weight Box	Holder
I-13	\$2.45	12	6	48 lbs.	A
E-13	2.45	12	6	51 lbs.	A
F-13	2.45	12	6	45 lbs.	A

List Price of Form A Holder 30 cts.

Standard Quantity Form A Holder . . . 100

Standard Finish Form A Holder, Polished Brass.

The same discount, packing, deliveries, etc., apply to these new Reflectors as upon the old B-6 Reflectors.

HOLOPHANE COMPANY

Sales Department

NEWARK, OHIO

New York

Boston

Chicago

San Francisco

Federal Roof Signs



Good Electric Signs are the best form of advertising. Federal Signs are striking in appearance and substantially constructed. Their Porcelain Enameled Steel Surface makes them readable a great distance away.

Write for Display and Roof Sign Bulletin No. 207

FEDERAL ELECTRIC COMPANY

Lake and Desplaines Streets, Chicago



Pump Pointers

Let us tell you how and where to sell electricity for pumping. There's profit in it if you go after it right.

Remember, it is power load at lighting rates.

"Sanitary" Pumps are low in first cost and economical in operation. They give continuous satisfaction, and require practically no attention. "Sanitary" Pumps meet every requirement for domestic water supply, and all types can be electrically driven. Get our data and prices. They will help you close a contract some day.

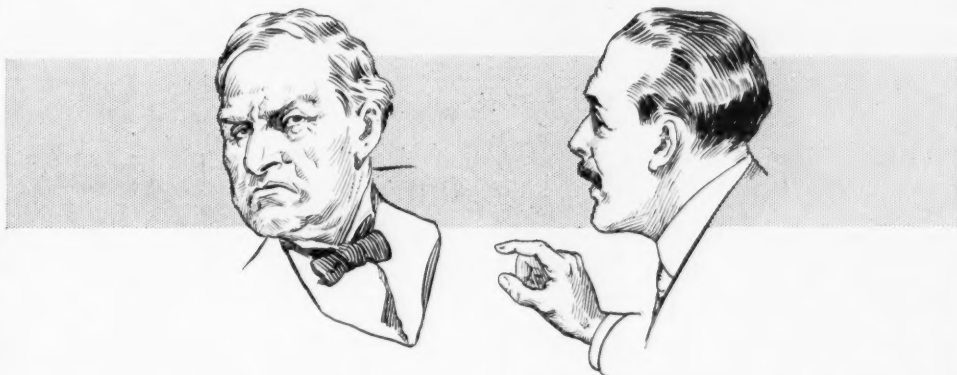
Sanitary Pump Co.,

12 South Canal, Dayton, Ohio

Manufacturers of Single and Duplex Double Acting Pumps, Deep Well Heads, Rotary Pumps

In writing to advertisers, mention "Selling Electricity."

You May "Turn Down" the 1900 Washer Simply Because it Consumes Little Current, but---



Take a broad-gaged view of the proposition *as a whole* and you'll find a good deal *more* than merely the current consumption to recommend it. Here are the *facts*—facts that you *can't* dodge.

1 *The 1900 Washer educates your residence consumers to use motors in the home.* Our washer is so simple, easy, convenient to use that the woman who has one is soon *coming to you* for other electrical devices. It is the *opening wedge* in every Home Electrical.

2 Though the 1900 Washer consumes little current, it more than compensates for the use of high efficiency lamps in residences. Sooner or later you'll feel the effect of the 25-watt tungsten. Anticipate this peak load loss by selling 1900 Washers which consume current in the day time.

3 The 1900 Washer is *advertised everywhere* and is sold on the basis of money-back-if-not-satisfied. No manufacturer of a current consuming household appliance has done as much as we to popularize electricity in the home.

4 We have records of dozens of cases where an electric service was put in *solely* to run a 1900 Washer.

5 Your profit on a *single* 1900 Washer will almost pay a week's salary of one of your solicitors. 1900 Washers can be sold by your solicitors while they are making their regular calls. If each man sells *only one* Washer a week, you are getting all the rest of his services for practically nothing.

Those are the facts. Can you ignore them? Write for proposition No. 1.

1900 WASHER COMPANY

BINGHAMTON, NEW YORK

In writing to advertisers, mention "Selling Electricity."

Wagner Electric

Manufacturing Company, St. Louis, Mo.

Wagner Single-Phase Motor

in Elevator
Service



The Wagner Company was the Pioneer

in the development of the commercially successful motor of the single-phase type. For many years it was practically the sole manufacturers of this type and is today the recognized leader in the single-phase field.

Central Stations need have no fear in adopting single-phase distribution on account of possible elevator requirements. They can be taken care of in a manner entirely satisfactory as illustrated.

Polyphase Generation with Single-Phase Distribution

has become to be recognized as modern practice. An alternating current single-phase and polyphase motor specialists, we invite correspondence. Please address the nearest office.

Wagner, Quality

Atlanta, Empire Bldg.

Boston, 110 State St.

Charlotte, N. C., Trust Bldg.

Chicago, Marquette Bldg.

Cincinnati, First Nat'l Bank Bldg.

Cleveland, New England Bldg.

Denver, 1621 17th St.

Kansas City, 815 East 12th St.

Los Angeles, 326 S. Los Angeles St.

Minneapolis, Security Bank Bldg.

Montreal, Bell Telephone Bldg.

New York, 50 Church St.

Philadelphia, Real Estate Trust

Bldg.

Pittsburg, Lewis Block.

Portland, McKay Bldg.

St. Louis, 6400 Plymouth Ave.

San Francisco, Balboa Bldg.

Seattle, Pacific Block.

Sioux City, 515-517 5th St.

BUY BUCKEYE TUNGSTENS *Now* B-E-C-A-U-S-E

Buckeye Tungstens are skillfully, carefully and honestly made.

Buckeye Tungstens are long of life and constant in service.

Buckeye Tungstens are carried in stock at all of branch offices and agencies.

BUCKEYE ELECTRIC CO.

CLEVELAND, OHIO

Flashing and Steady Burning ELECTRIC DISPLAY SIGNS

Are Our Specialty



If you are after something original along these lines consult us. We assist Central Stations in selling Electric Signs.

Haller Sign Works (Inc.)

319 South Clinton Street
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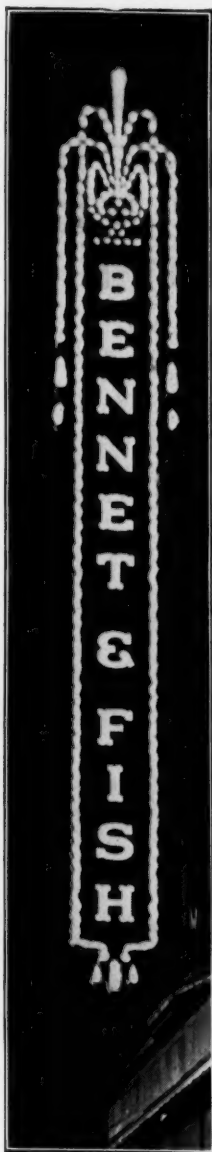
In writing to advertisers, mention "Selling Electricity."

The A. & W. Electric Sign Co.

Toronto

CLEVELAND

New York



**The Central Station:
The Business Solicitor:
The Merchant:**

**Make it your business to get business and
business will come.**

A. & W. ELECTRIC SIGNS

Appeal to the real live ones because they are business getters for modern merchants and business boomers for modern stations.

Many new and novel exclusive designed signs have recently been constructed which are only possible by the use of the new A. & W. flashing device. The accompanying cut of sign when in operation is a reproduction of a water fountain by electric bulbs. The bowl of fountain is produced by ruby lamps, the streams and drips by white lamps, and when in operation is a perfect reproduction of flowing water. Since January 1, 1909, five of these fountain signs have been installed, one in Cleveland, Rochester, Youngstown, Pittsburg and Erie.

Many new moving attractions have been installed by the A. & W. Company recently, such as moving automobiles, diving girls, waving flags, large steamboats in motion, sail ships on water, revolving balls, etc.

Send for Special Designs and Catalogue.

The A. & W. Electric Sign Co.

The Largest Electric Sign Works in the World

CLEVELAND, OHIO

**TORONTO, ONT.
64-72 Farley Ave.**

**NEW YORK CITY
1370 Broadway**

Engines, Boilers, Etc.

FOR SALE at LOW FIGURES

by the

Brooklyn Edison Co.

In good condition and each item is a bargain
for any station using this type of equipment:

- | | |
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| <p>1—600 H.P. Triple Expansion Vertical Engine, built by Lake Erie Engineering Works, 1892.</p> <p>1—600 H.P. William Vertical Triple Expansion Engine, built by Williams. Todd & Co., 1895.</p> <p>1—1000 H. P. Horizontal Tandem Compound Engine, built by McIntosh & Seymour.</p> <p>1—1000 H.P. Worthington Condenser (one condenser without tubes), otherwise in as good condition as when new. Nickel Tubes.</p> <p>2—Campbell & Zell Water Tube Boilers. Each having a minimum rating of 350 H.P. under ordinary conditions.</p> | <p>1—Worthington Double End Duplex Condenser Pump, 14 in. x 15 in. x 15 in. x 15 in.</p> <p>1—L. H. Four Valve Automatic McIntosh & Seymour Tandem Compound Engine, size 20x30x36</p> <p>1—American Copper Coil Feed Water Heater. Rated 600 H.P.</p> <p>1—Worthington Duplex Steam Pump Plunger Pattern.</p> <p>1—Medal Stack. 54 in. diameter x 90 feet long, one-half made from $\frac{1}{4}$ in. material and the other half made out of 3-16 in. material. Stack is made in three lengths, with holes punched and fitted so that the sections can be readily riveted or bolted together.</p> |
|---|--|

Also for sale, a quantity of Ballou-Hutchin 35 ampere Clock Switches and several hundred G. E. D. C. $4\frac{1}{2}$ ampere enclosed Arc Lamps. If interested, will be glad to have you inspect, or will send details and quote prices by mail on application. Write or call.

Edison Electric Illuminating Co. of Brooklyn

360 PEARL STREET

BROOKLYN, N. Y.

Quality not Price the Best Argument

If mere cheapness were the main consideration in lighting, there would be no electric light. There are many illuminants cheaper than electricity, but none so good. Similarly there are many fixtures cheaper than

Enos Tungsten Fixtures



but none so harmonious in design, none so conscientiously made, none so carefully calculated to give exact illuminating results. In addition to these qualities

Enos Tungsten Fixtures are Moderate in Price

Central Station Managers, Contract Agents and Solicitors will find that ALL of their better class customers will welcome them.

Carry Our Catalogue With You When Next
You Call Upon a Particular Customer

The Enos Company
NEW YORK

Write for Catalogue No. 10



FOURTEEN

years of constant and successful efforts to improve has made



the standard of the market, the high standard by which others are judged.

Simplex Electric Heating Devices

represent not a record of changes from one form of construction to another, but on the contrary a constant improvement of a single form. This form was selected because it was scientifically correct and the history of electric heating has fully proved this fact. Buy goods with a record for quality—not promises.

SIMPLEX ELECTRIC HEATING CO.

Cambridge, Mass.

Monadnock Block, Chicago
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PHILADELPHIA'S NEW SIGN ORDINANCE



N ordinance has recently been passed by the City Councils of Philadelphia permitting the extension of Electric Signs from the house line upon any street of that city, subject only to the approval of every such sign by the Chief of the Electrical Bureau.

¶ The previous ordinance practically prohibited all electric sign construction in all of the important Philadelphia streets, except signs which were built flat against the walls of the buildings.

¶ This new ordinance, therefore, opens up to the sign manufacturers one of the richest fields for new business in this country. National advertisers also have an unexampld opportunity to use this most efficient means of publicity in a city which contains more dwellings than any other community in the country—in round numbers, 314,000.

¶ We would be glad to furnish rates and estimates or to recommend prominent locations to local or national advertisers.

¶ If you want Electricity anywhere for anything in Philadelphia, consult

The Philadelphia Electric Co.
Tenth and Chestnut Streets
PHILADELPHIA

New Highways for Business

Lie Open to

Central Stations

In the Use of

Benjamin

Tungsten

Fixtures

FOLLOW THIS LEAD



In and Out Door Fixtures

1 to 6 Lamps
25 to 250 Watts

Write for Our
New Tungsten Bulletin No 4

Benjamin Electric Manufacturing Co.

NEW YORK

CHICAGO

SAN FRANCISCO

42 West Jackson Boulevard

Fort Wayne Fan Motors

No more complete line on the market this season than the Fort Wayne Fan Motors. When the real hot weather comes on your customers will want fans and want them at once. Your order ought to be planned now to secure best attention.

**For Residences, Offices
Stores, Hotels, Restaurants**

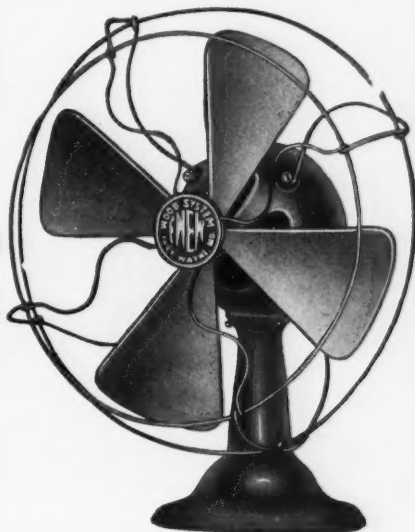
Fort Wayne Fan Motors give a satisfaction that can be experienced with no others. Have you seen our new Fan Motor Catalog? It shows the complete line, Desk, Wall Bracket, Suspended, Ceiling and Column Fans.

Ask for Catalog 1114 To-day

Fort Wayne Electric Works

Main Office: Fort Wayne, Ind.

Factories: Fort Wayne and Madison



Fort Wayne 8-inch Desk Fan

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Boston	Cincinnati	Madison	New Orleans	Philadelphia	San Francisco	St. Louis	Syracuse

In writing to advertisers, mention "Selling Electricity."

NEW Scientific Lighting Unit The

STAR FLAME LAMP

Scientifically designed to give exact illumination results. The indoor unit here illustrated consists of a small flame lamp equipped with bowl-frosted bulb and a special Holophane Extensive Type Reflector.



In efficiency the STAR FLAME excels any commercial electric lamp now on the market of equal candle-power. It is of neat appearance, only 1 5-8x8 inches in size, brush brass finish, with standard Edison base which screws into any lamp socket.

STAR ELECTRICAL CONCERN

74 Cortlandt Street
NEW YORK CITY

Write for Bulletin

